

# Year 5

## Answers



## Term 1

Units 1 – 10

# English

## ANSWERS

Term 1

**YEAR 5**

## UNIT 1

### Set 1 Strategy: Making Predictions

1. c) 2. c) 3. b) 4. d)

### Set 2 Novel: Scarlett

1. b) 2. d) 3. a) 4. b) 5. b)  
6. b) 7. d) 8. b)

### Set 3 Novel: Scarlett (2)

1. d) 2. a) 3. c) 4. a) 5. c)  
6. b) 7. c)  
8. Answers may vary. Mark accordingly.

### GRAMMAR

- The teacher is **in front** of the classroom.
- IN** this picture there are ten students.
- Most of the students are sitting **AT** their desks.
- The teacher has been writing **ON** the board.
- One of the students has his hand **IN** the air.
- The plant is **BESIDE** the door.
- The clock is **ABOVE** the white board.
- The square bin is **NEXT TO** the teacher's desk.

### VOCABULARY

- create
- plenty
- fabric
- consumable
- lasting

## UNIT 2

### Set 1 Strategy: Finding Word Meaning in Context

1) strategy	g) plan to obtain a goal.
2) devices	d) machines.
3) reactions	a) responses..
4) electricity-conducting	c) able to have an electrical current pass through it
5) accomplishment	f) achievement
6) constantly	b) without ceasing.
7) interact	e) mix with, act on each other.

### Set 2 Exposition : Is Bottled water Better?

- b)
- c)
- c)
- d)
- b)
- b)
- c)
- The manufacturing process to make the plastic bottles uses significant amounts of oil and water, which are precious natural resources. The used bottles also generate lots of waste which takes up space in landfills and takes a very long time to decompose.

### Set 3 Cloze Passage

- century
- visited
- tolerate
- accommodation
- pleasant/recommended
- visitors
- stall
- recommended/pleasant

**GRAMMAR**

- 1) Katie will finish her assignment BY Friday
- 2) I saw a famous person walking down the street yesterday BETWEEN 3pm and 5pm
- 3) I left the party AT/BEFORE/AFTER nine o'clock.
- 4) Nick will come home straight AFTER soccer practice.
- 5) Dad will be home from work WITHIN the hour.
- 6) I have not been to the movies SINCE the beginning of the year.
- 7) "Please tidy your room BEFORE you go out to play!" said mum.
- 8) Pete got in trouble for talking DURING assembly.

**PUNCTUATION**

Ro met Molly at the station and seemed happy and excited. Molly expected them to go to the shop first, but her mother said she had the rest of the day off.

"I've got something to show you."

"What?"

"It's your Christmas present."

"So do I get it now?"

"Well I won't see you on Christmas day will I?"

**UNIT 3****Set 1 Strategy: Making Inferences**

- 1) c)
- 2) d)
- 3) a)
- 4) c)

**Set 2 Poetry**

- 1) c)
- 2) b)
- 3) b)
- 4) b)
- 5) b)
- 6) a)
- 7) d)
- 8) Answers will vary – mark accordingly.

**Set 3 Information Report**

- 1) d)
- 2) d)
- 3) b)
- 4) a)
- 5) b)
- 6) b)
- 7) Drawings of snakes, spiders, crabs, and imaginary animals crawling along her arms, legs, and feet.
- 8) Because she was buried in a sacred ceremonial spot with lots of gold, treasures and spear throwers. She was also very carefully preserved.

**GRAMMAR**

Teacher.

**VOCABULARY**

- 1) irascible
- 2) unbearable
- 3) conceivable
- 4) understandable
- 5) valuable

**UNIT 4****Set 1 Strategy: Recognising Fact and Opinion**

- 1) b)
- 2) b)
- 3) b)

**Set 2 Corrie Ten Boom**

- 1) b)
- 2) d)
- 3) b)
- 4) b)
- 5) c)
- 6) d)
- 7) d)
- 8) b)

**Set 3 Extract : Wind Song**

- 1) d)
- 2) c)
- 3) a)

- 4) b)
- 5) a)
- 6) d)
- 7) Because she was so sure the tornado was coming and they didn't have much time.
- 8) Answers may vary. Mark accordingly.

### GRAMMAR

- 1) adjusted
- 2) gone
- 3) stopped
- 4) looked
- 5) separated
- 6) lifted

### PUNCTUATION

Molly thought about it – Christmas day had always been a big day in the house by the lake, especially since Locky was old enough to understand about Santa and presents. But lately, things had changed and she wasn't sure she wanted to be there this year.

“I could come up on the train, maybe.”

“Let's think about that later. You're going to have to see your present now anyway.”

## UNIT 5

### Set 1 Strategies:

#### Identifying Author's Purpose

- 1) c)
- 2) b)
- 3) a)
- 4) c)

### Set 2 Information Report

- 1) b)
- 2) d)
- 3) c)
- 4) c)
- 5) d)
- 6) a)
- 7) b)
- 8) d)

### Set 3 Book Review: Being Bee

- 1) c)
- 2) b)
- 3) c)
- 4) d)
- 5) b)
- 6) d)
- 7) c)
- 8) c)

### GRAMMAR

- 1) it
- 2) she
- 3) me
- 4) her
- 5) my
- 6) I
- 7) myself
- 8) its
- 9) It
- 10) me

### VOCABULARY

- 1) bodily
- 2) belief
- 3) doctor
- 4) ghost
- 5) stage

## UNIT 6

### Set 1 Strategies: Figurative Language

- 1) Answers will vary. Mark accordingly.
- 2) Thin as a toothpick; Fit as a fiddle; Proud as a peacock
- 3) as right as rain, blood, sweat and tears, as mad as a cut snake.
- 4) Maddison, the hurricane
- 5) as right as rain, as mad as a cut snake.

### Set 2 Article

- 1) b)
- 2) a)
- 3) b)
- 4) a)
- 5) a)
- 6) d)

- 7) Instead of just throwing the waste away, it could become useful. This would also mean there would be less demand on the other materials we use for clothes which destroy the environment in the production process.
- 8) If you can choose to wear clothes made from recycled materials, you can help the Earth's future by having a less damaging impact on the environment.

### Set 3 Poetry

- 1) a)
- 2) a)
- 3) b)
- 4) a)
- 5) c)
- 6) a)
- 7) Burst from the bottles like corks.
- 8) Like notes in the books in the piano stool.

### GRAMMAR

- 1) their
- 2) I
- 3) its
- 4) my
- 5) It
- 6) I
- 7) me
- 8) my
- 9) its
- 10) my

### PUNCTUATION

The day was hot and clear and for the first time there was no sound of wind in the line of pine trees out the front of the house. They stood in a row, as still as fossilised trees and cast a deep shadow on the garden. Baking in the heat, her mother led Molly into the house, blindfolded her, then turned her round three times.

“Mind the rug,” she said.

Molly tripped on it. “Where are we going?”

“You'll see.”

## UNIT 7

### Set 1 Strategy:

- 1) (c)
- 2) (d)
- 3) (c)
- 4) (c)

### Set 2 Recount: The Farm, the Dogs and Me

- 1) Answers will vary. (David loves going to the farm because it is filled with stories, everything is loved, it makes him think and feel and he does good, honest work there.)
- 2) Rover barks in their face.
- 3) Tying up the grapevines with baling bands.
- 4) (a)
- 5) (d)
- 6) (b)
- 7) (d)

### Set 3 Information Report: Rattlesnake Rustlers

- 1) (d)
- 2) (b)
- 3) Keep a safe distance from it, don't touch it, don't step over rocks or logs, don't put your hands into woodpiles or dark corners.
- 4) Go to the doctor or the hospital and get treatment.
- 5) Because she uses a tool to catch the snakes, not her hands.
- 6) It is less dangerous and less harmful to the snake.
- 7) (c)
- 8) (d)

### GRAMMAR

#### Exercise One

- 1) has
- 2) are
- 3) crawls
- 4) is
- 5) taste
- 6) has
- 7) makes
- 8) hopes

Exercise Two  
Teacher.

### VOCABULARY

Exercise 1

- 1) confusion
- 2) option
- 3) congratulations
- 4) diversion
- 5) station
- 6) pension
- 7) relation
- 8) mission
- 9) completion

Exercise 2

Answers will vary.

## UNIT 8

### Set 1 Strategy: Facts and Details

- 1) (c)
- 2) (c)
- 3) (a)
- 4) (d)
- 5) (b)

### Set 2 Biography: Harriet Tubman

- 1) Because she wanted freedom for all slaves, not just the ones she could personally help.
- 2) (c)
- 3) (d)
- 4) (b)
- 5) (d)
- 6) She knew because she had sent out scouts previously to find out.
- 7) (d)
- 8) So the Confederate Army couldn't use them to escape.

### Set 3 Cloze Passage: West Asian Clothing.

- 1) different
- 2) cover
- 3) belonged
- 4) another
- 5) turban

- 6) fighting
- 7) piece
- 8) shorts
- 9) working

### GRAMMAR

- 1) description
- 2) laughter
- 3) helper
- 4) movement
- 5) explanation
- 6) loss
- 7) discovery
- 8) success

### PUNCTUATION

"Flooper Fizz and a basket of fish and chips, please." Benjamin Bartholomew Piff watched as the surly leprechaun spooned some glittering syrup onto the wooden tray he was carrying. Seconds later the magical syrup transformed into a glass of Ben's favorite drink and a basket of crispy fish and fries.

"Thanks," Ben said, reaching for a fry.

"Keep the line moving," the leprechaun said, waving his big spoon.

Ben walked to the side and scanned the packed Pot o' Gold restaurant for his friends Jonathan, Gene, Nora and Fizzle. He couldn't wait to tell them his big secret.

*(The Misadventures of Benjamin Bartholomew Piff: Wishful Thinking by Jason Lethcoe)*

## UNIT 9

### Set 1 Strategy: Sequences

- 1) (b)
- 2) (c)
- 3) (b)
- 4) (b)
- 5) (c)

**Set 2 Poem: A Fine Thing**

- 1) (a)
- 2) (a)
- 3) (a)
- 4) (c)
- 5) The sad sounds of the wind and waves.
- 6) They are all inanimate objects that the poet brings to life.
- 7) The timber cutting refers to the timber of the ship cutting the waves.
- 8) That it doesn't have any troubles.

**Set 3 Information Report: Catching Some Rays**

- 1) Power or energy derived from the sun.
- 2) (b)
- 3) (c)
- 4) (b)
- 5) Because fossil fuels will eventually run out and they produce pollution when they are burned.
- 6) It can be re-used.
- 7) (a)
- 8) Hydrogen burns clean – producing only water.

**GRAMMAR**

1. many
2. much
3. many
4. much
5. many
6. many
7. much
8. much

**VOCABULARY**

Teacher

**UNIT 10****Set 1 Strategy: Cause and Effect**

- 1) (a) and (b)
- 2) The leaves burn very fast and hot.
- 3) Flying embers, swept ahead by the wind, cause spot fires to flare up ahead of the bushfire and start another fire.

- 4) They burn, but then are able to regrow.
- 5) They either suffocate because of the smoke, or are burnt.

**Set 2 Book Reviews: Justin D'Ath**

- 1) (a)
- 2) Answers will vary. (They all feature animals, they are all action-packed and they feature young boys as the main characters.)
- 3) The first two books focus on animals, whereas the last one is more about a pool.
- 4) (a)
- 5) \$14.95
- 6) Olki
- 7) A spitting cobra.
- 8) At night because Audrey is nocturnal.

**Set 3 Novel: The Dark is Rising**

- 1) Because he was trying to hold onto the music.
- 2) They were both laden with snow and he remained behind a window.
- 3) The first world was full of houses, whereas the second world was a large forest.
- 4) (a)
- 5) (a)
- 6) (c)
- 7) 1f, 2d, 3a, 4c, 5b, 6e
- 8) '*They were bare of leaves, clad only in the deep snow*' is an example of personification because the word 'clad' makes it sound like the trees are wearing the snow like clothing in the same way that humans wear clothing.

**GRAMMAR****Exercise One**

1. about/of
2. at
3. in
4. to
5. from
6. of
7. at
8. about

**Exercise Two**

Teacher



**PUNCTUATION**

It was shortly after his daring rescue that Candlewick had offered Ben his job. It was the happiest day of Ben's life. Living at the Wishworks Factory was the closest thing Ben had had to a real home since his parents had died a year and a half earlier.

"Hey, Ben! Over here!" someone suddenly called out. Ben looked toward the huge tree-stump tables. There was Jonathan Pickles, motioning for him to come over. Ben grinned and pushed the brim of his oversize top hat away from his eyes, then crossed the field of clover to his waiting friends.

"Hi, guys!" Ben said. As he sat down at the big stump he noticed that someone was missing. "Where's Fizzle?"

**Year 5 Enriching English****Unit 1 – Poem**

1 B  
2 C  
3 A  
4 A  
5 D

**Unit 7 – Novel Extract**

1 B  
2 D  
3 C  
4 A  
5 D

**Unit 2 – Novel Extract**

1 B  
2 D  
3 C  
4 B  
5 B  
6 C

**Unit 8 – Series Review**

1 C  
2 D  
3 C  
4 A  
5 B

**Unit 3 – Cartoon**

1 C  
2 D  
3 D  
4 D  
5 B

**Unit 9 – Letter**

1 A  
2 C  
3 A  
4 D  
5 B

**Unit 4 – Article**

1 B  
2 D  
3 C  
4 D  
5 A

**Unit 10 – Film Review**

1 B  
2 C  
3 C  
4 A  
5 D

**Unit 5 – Book review**

1 C  
2 D  
3 C  
4 A  
5 D

**Unit 6 – Poster**

1 B  
2 A  
3 D  
4 A  
5 B

# **General Ability**

## **ANSWERS**

**Term 1**

**YEAR 5**

## UNIT 1

### Word List

1. cardigan
2. rodeo
3. callous
4. chisel
5. impetuous
6. ignorant
7. deluge
8. compel(led)
9. bristle
10. aghast
11. fletcher
12. galleon
13. hustle(d)
14. gnome(s)
15. scandal
16. earnest

### “re” family

1. receipt
2. refugee(s)
3. recorder
4. rebel
5. result

### Using clues

1. reach
2. refill
3. react
4. recipe
5. reality
6. relate
7. red
8. repel
9. reason
10. Reef

### Rearranged words

1. refill(s)
2. rebel(s)
3. reason
4. relate
5. refugee(s)

### Puzzle

17,  $2A+B=17$ ,  $A+2B=22$ . Compare and solve  
Circle B = 9 points

### Synonyms

1. feminine
2. gala
3. deliver
4. vendetta
5. rare
6. forge

### Antonyms

1. daring
2. continuation
3. tender
4. malleable
5. stinking
6. fertile

### Word Knowledge

1. a low point
2. of punishment; used for punishment
3. clippers held in the hand for pruning plants

### Fruit and Vegetables

1. garlic
2. passionfruit
3. watermelon
4. pineapple
5. corn

### Occupations

1. advocate
2. bandit
3. FBI agent
4. farrier
5. fellmonger

### Odd one out

1. wood
2. chest
3. ivory
4. sit
5. water

### One word for many

1. c
2. a
3. e
4. b
5. d

**Idioms**

1. d
2. e
3. a
4. b
5. c

**GA Test**

1. c
2. a
3. a
4. b,  $(17 - 3) \times 3 = (31 + 11)$
5. b
6. c
7. b
8. b
9. true
10. c, Think about it very carefully before you decide.
11. d
12. a
13. b
14. a
15. c
16. c
17. b, STAKE
18. c
19. a
20. b

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## UNIT 2

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**Word List**

1. pedigree
2. sombre
3. sieve
4. yolk
5. acquaintance
6. sentimental
7. quarrel
8. murmur
9. knave
10. meagre
11. legible
12. neigh
13. siege
14. relevant
15. plummet(ed)
16. sumptuous

**“bu” family**

1. building
2. buccaneer
3. buffalo
4. bucket
5. build

**Using clues**

1. bubble
2. budding
3. budget
4. bulk
5. buck
6. bullet
7. buffoon
8. bully
9. buckle
10. burden

**Rearrange the words**

1. bucket
2. buckle
3. budding
4. building
5. bully

**Puzzle**

40 units, there are 13 squares, so the area of each square is 4 units<sup>2</sup>. This means that the length of each side is 2 cm. Being 20 sides, it is 20 times 2.

**Synonyms**

1. fade
2. fragment
3. unmoved
4. fierce
5. holy
6. mingle

**Antonyms**

1. ill-bred
2. appropriate
3. despise
4. loss
5. profane
6. separate

**Word Knowledge**

1. of marriage; of a wedding
2. a stupid person
3. thoughtful; pensiveness

**Fruit and Vegetables**

1. asparagus
2. coconut
3. beetroot
4. guava
5. papaya

**Where do these people come from?**

1. Grenadian
2. Nepalese
3. Poles
4. Bahrainis
5. Samoans
6. Congolese

**Odd one out**

1. paper
2. paper
3. farm
4. koala
5. 34, (not divisible by 3)

**One word for 2 or more**

1. e
2. d
3. a
4. c
5. b

**Idioms**

1. d
2. e
3. a
4. b
5. c

**GA Test**

1. a
2. Solo, Duet, Trio, Quintet, Octet
3. c, Brian studied very hard to get into a selective school.
4. a, 2.5 times 8
5. c
6. a

7. a
8. b
9. b
10. d
11. d
12. c
13. d
14. c
15. c
16. b
17. d
18. b,  $(5 \times 5) \times 2 = 50$
19. a
20. c

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**UNIT 3**

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**Word List**

1. courteous
2. unanimous
3. pavilion
4. competent
5. artificial
6. ambiguous
7. beneficial
8. convenient
9. epilogue
10. gregarious
11. etiquette
12. stationery
13. frieze
14. crescent
15. impromptu
16. luminous

**“me” family**

1. measles
2. megaphone
3. medical
4. mechanic
5. meditate

**Using Clues**

1. media
2. medium
3. measure
4. meddle
5. meat
6. mellow
7. medieval
8. melody
9. medal
10. menace

**Unjumble words**

1. megaphone
2. message
3. merge
4. mend
5. mentor

**Synonyms**

1. bold
2. peel
3. flagrant
4. shake
5. soft
6. amazed

**Antonyms**

1. soft
2. deliberate
3. coldness
4. limited
5. last
6. aversion

**Puzzles**

$$18 \times 4 + 12 = 84$$

**Word Knowledge**

1. fine, filmy cobwebs
2. activating or boosting energy, enlivening etc.
3. splendid; magnificent; glorious

**Prefixes**

1. e
2. a
3. d
4. b
5. c

**Foreign words used in English**

1. e
2. f
3. c
4. a
5. b
6. d

**Odd one out**

1. beach
2. briefcase
3. diary
4. sherry
5. cough

**One word for many**

1. d
2. e
3. a
4. b
5. c

**Idioms**

1. d
2. c
3. e
4. a
5. b

**GA Test**

1. b
2. b
3. c
4. b
5. b
6. d
7. a (B= 2<sup>nd</sup>, 2 skips, D=4<sup>th</sup>, 4 skips...)
8. c
9. c
10. b
11. d, He spent yesterday hidden away in his country retreat.
12. b
13. d (4sides +4 sides =8 sides)
14. d
15. d
16. b
17. d
18. a
19. c (10-6)×3=12
20. c

## UNIT 4

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### Word List

1. bibliography
2. catastrophe
3. rebellious
4. sultan
5. meek
6. silhouette
7. vain
8. pixie(s)
9. geyser
10. resent
11. insult(ed)
12. abdicate
13. simultaneous(ly)
14. accommodate
15. quotient
16. reminiscent

### “fr” family

1. fracture
2. fraction
3. freedom
4. freestyle
5. freeze(s)

### Rearrange words

1. freak
2. free
3. fresh
4. fragrant
5. frail

### Using Clues

1. frame
2. frenzy
3. franchise
4. frequent
5. fragile
6. frank
7. fraternal
8. friction
9. fraud
10. fridge

### Synonyms

1. ambiguous
2. comrade

3. dark
4. masculine
5. honest
6. task

### Antonyms

1. alarm
2. weak
3. grotesque
4. appease
5. prosperity
6. oblivious

### Puzzle

$$\begin{array}{r} 121 \\ \underline{461} \end{array}$$

### Word Knowledge

1. an intervening period of time; a gap or break.
2. the direct line of descent from an ancestor.
3. an instrumental composition suggestive of improvisation.

### Prefixes

1. e
2. a
3. d
4. b
5. c

### people and their countries

1. Kuwaitis
2. Libyans
3. Maltese
4. Filipinos
5. Rwandans

### One word for many

1. e
2. a
3. d
4. b
5. c

### Idioms

1. c
2. d



3. e
4. a
5. b

**GA Test**

1. c
2. b, STEAL
3. c
4. d
5. a
6. c
7. b
8. a
9. A, W, V
10. a
11. d
12. a, has one more straight line than the figure before it
13. d
14. b,  $6+4+6+4$
15. d
16. a
17. d,  $(15 - 7) \times 3 = 24$
18. a, Mothers are always older than their daughters.
19. carrot
20. a

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## UNIT 5

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**Word List**

1. intricate
2. beckon(ed)
3. tolerant
4. spite
5. fickle
6. abrupt
7. personnel
8. prohibit(ed)
9. infuriate
10. relinquish
11. touse
12. succession
13. substitute
14. hypnotise
15. pursuit
16. retrieve(s)

**“cla” family**

1. cleaver
2. clammy
3. clever
4. cloak
5. clear

**Using Clues**

1. clairvoyant
2. classified
3. clarinet
4. classroom
5. clamour
6. clasp
7. clamp
8. class
9. classic
10. clothes

**Rearrange words**

1. clarify
2. clench
3. clay
4. clean
5. clap

**Synonyms**

1. peak
2. deceitful
3. guilty
4. demolish
5. snuggle
6. cultivate

**Antonyms**

1. unbounded
2. taciturn
3. unfit
4. honorable
5. last
6. complete

**Puzzle**

$36\text{m}^2$ , the semiperimeter is 12cm.

1	2	3	4	5	6
11	10	9	8	7	6
11	20	27	32	35	36

**Word Knowledge**

1. a controversial argument.
2. to have called with authority.
3. to make repayment to for expense or loss incurred.

**One word for many**

1. b
2. e
3. d
4. a
5. c

**Foreign words used in English**

1. e
2. a
3. d
4. b
5. c

**Idioms**

1. c
2. d
3. e
4. a
5. b

**GA Test**

1. d
2. d
3. c
4. MOBILE
5. b
6. a
7. a
8. b
9. d
10. a
11. b
12. b
13. a, Jack and Jill went up the hill to fetch a pail of water.
14. d
15. c
16. b, divide 2 plus 5
17. d
18. c
19. a
20. d

**UNIT 6****Word List**

1. brink
2. fidget
3. taunt
4. frenzy
5. stationary
6. anticlimax
7. solemn
8. embarrass
9. insolent
10. interrupt(ing)
11. anxious
12. reluctant
13. enthusiastic
14. exploit
15. licence
16. gesture

**“lo” family**

1. load
2. local
3. locomotive
4. long
5. lob

**Using clues**

1. lobster
2. locker
3. locksmith
4. logic
5. loan
6. lonely
7. loathe
8. locust
9. lock
10. lodge

**Rearrange words**

1. log(s)
2. loaf
3. location(s)
4. loch
5. loud

**Synonyms**

1. condemn
2. wrong doing

3. uncivil
4. cut up
5. disorderly
6. bicker

### Antonyms

1. fragment
2. vague
3. sombre
4. condemnation
5. refined
6. honest

### Puzzle

$$80, (88 \times 5) - (90 \times 4) = 80$$

### Word Knowledge

1. a vessel for heating substances to high temperatures.
2. the vault of heaven.
3. not to be avoided or evaded.

### One word for many

1. e
2. d
3. a
4. c
5. b

### Foreign words used in English.

1. b
2. d
3. a
4. e
5. c

### Idioms

1. d
2. e
3. a
4. b
5. c

### GA Test

1. d
2. d
3. b
4. JAPAN
5. c

6. d
7. a
8. b
9. a
10. b
11. a
12. c
13. c, most foods that we eat are safe for birds.
14. b
15. a
16. d,  $44 + 2 = 23 \times 2$
17. d
18. d
19. d
20. c

## UNIT 7

### Word List

1. expedition
2. bluebottle
3. lull
4. dominion
5. worthwhile
6. inquisitive
7. champ(ing)
8. heartily
9. hoax
10. harp
11. mediocre
12. delectable
13. nymph(s)
14. melancholy
15. stark
16. queer

### “ch-” family

1. chemical
2. stench
3. headache
4. chaos
5. architect

### Using clues

1. architect
2. stomach

3. sandwich
4. chlorophyll
5. chemist
6. stench
7. champion
8. chaos
9. archbishop
10. headache

### Rearranged words

1. sandwich
2. character
3. chlorophyll
4. stench
5. champion

### Puzzle

Rachel is the ghost.

### Synonyms

1. baffle
2. strong
3. harmonise
4. purity
5. devise
6. scoundrel

### Antonyms

1. gather
2. predator
3. random
4. praise
5. opponent
6. passionate

### Word Knowledge

1. **concoct** – to make by combining parts.
2. **insolent** – boldly rude or disrespectful.
3. **transcend** – to go or be above or beyond.

### Fruit and Vegetables

1. ginger
2. banana
3. kiwi fruit
4. tomato
5. guava

### Occupations

1. haberdasher

2. confectioner
3. hawker
4. warder
5. executive

### Odd one out

1. eucalyptus
2. skin
3. freestyle
4. 1987
5. convertible

### One word for 2 or more

1. c. illegal
2. e. appetite
3. a. dazzle
4. b. yearn
5. d. occasional

### Idioms

1. a.
2. d.
3. e.
4. b.
5. c.

### GA Test

1. b
2. c
3. a
4. a
5. d
6. c
7. a
8. b
9. d The King's dominion stretched farther than the eye could see.
10. a (number)
11. b
12. d
13. b (U=1,V=2...G=13,  
H=1,I=2,...T=13)
14. a (5,5,1)
15. 22/7
16. c
17. a
18. 29
19. c
20. a ( $10 \times 14 \div 2 = 70$ )

## UNIT 8

### Word List

1. hearsay
2. modest
3. alight
4. incognito
5. hoarse
6. treason
7. refute
8. charred
9. decorated
10. stratagem
11. hatchet
12. occupant
13. superior
14. fraternise
15. erroneous
16. dispense

### “ge” family

1. carriage
2. average
3. image
4. wedge
5. bandage

### Using clues

1. fringe
2. carriage
3. image
4. average
5. germinate
6. budget
7. wedge
8. advantage
9. budge
10. bandage

### Rearrange the words

1. average
2. budge
3. courage
4. generation
5. wastage

### Puzzle

Tom and Gabriella

### Synonyms

1. reluctant
2. boisterous
3. alike
4. guide
5. raid
6. elderly

### Antonyms

1. pleasure
2. pollute
3. mischievous
4. slumber
5. talkative
6. unintelligent

### Word Knowledge

1. **plankton** – small animal and plant organisms that float in the water
2. **milliner** – someone who sells or makes women’s hats
3. **chandelier** – an ornamental branched support hanging from the ceiling, holding lights.

### Fruit and Vegetables

1. rhubarb
2. courgette
3. peach
4. swede
5. grape

### Kinds of people

1. adversary
2. laggard
3. spouse
4. misanthrope
5. grouch
6. bore

### Odd one out

1. wave
2. letter
3. farm
4. koala
5. stand

**One word for 2 or more**

1. d.
2. b.
3. e.
4. a.
5. c.

**Idioms**

1. c.
2. e.
3. b.
4. d.
5. a.

**GA Test**

1. c
2. b
3. b
4. c
5. c
6. b
7. c
8. c
9. b (Beauty is in the eye of the beholder.)
10. a (appliance)
11. c –  $\underline{1} \times \underline{1}$ ,  $\underline{2} \times \underline{3}$ ,  $\underline{3} \times \underline{5}$ ,  $\underline{4} \times \underline{7}$ ,  $\underline{5} \times \underline{9}$   
(**1<sup>st</sup> numbers** are consecutive, **2<sup>nd</sup> numbers** are increasing by 2)
12. c
13. c
14. b
15. 4039146000km
16. c
17. c
18. 10
19. c
20. d ( $6 \times 3 + 3 = 21$ )

---

**UNIT 9**

---

**Word List**

1. overshadowed
2. Plague
3. turrets
4. mere
5. proceed
6. hasty
7. fusty

8. vermin
9. remanded
10. pedlar
11. rampant
12. bugle
13. pavilion
14. gaiety
15. treacherous
16. gloat

**“tion” family**

1. celebration
2. fiction
3. dictionary
4. occupation
5. destruction

**Using Clues**

1. potion
2. station
3. fiction
4. inspection
5. occupation
6. dictionary
7. correction
8. sensation
9. introduction
10. equation

**Unjumble words**

1. correction
2. location
3. conversation
4. equation
5. introduction

**Synonyms**

1. decline
2. idea
3. patron
4. fluent
5. glorious
6. cauldron

**Antonyms**

1. complex
2. lengthy
3. prime
4. illicit
5. memorable
6. dictatorship

**Puzzles**

$$118 = (3 \times 5) + (4 \times 5) + (5 \times 5) + (6 \times 5) + (7 \times 4)$$

**Word Knowledge**

1. monotone – a single tone sound.
2. eclipse – the darkening of the light of a satellite when its primary planet stands between it and its light source. To surpass, to make dim by comparison.
3. counterfeit – made to imitate something else, so as to deceive; an imitation; forgery.

**Prefixes**

1. d. separation
2. b. negative
3. a. half
4. e. out of
5. c. very small

**Foreign words used in English**

1. c. seize the day
2. e. social blunder
3. b. dread and anxiety
4. f. a type of dance
5. d. a coffee shop
6. a. already seen

**Odd one out**

1. stallion
2. pole
3. Noreen
4. chicken
5. ice

**One word for 2 or more**

1. c. idle talk
2. d. horse for riding
3. a. a long way off
4. e. make very angry
5. b. bring back

**Idioms**

1. c. informal and relaxed
2. e. agree with
3. d. to give up, withdraw from a contest
4. a. keep a secret
5. b. rain heavily

**GA Test**

1. c
2. d
3. b
4. d
5. c
6. a
7. c
8. c
9. a (Max deserved every penny of the grand prize)
10. b (juvenile)
11. b (rule:  $\times 3 \div 2$ )
12. a
13. b
14. c
15. \$42750,  $(385000 \times 15\%) - 15000$
16. d
17. a
18. 191
19. a (The space between F and J =3, H and N =5 and J and R = 7 because F is the 3<sup>rd</sup> and H is the 5<sup>th</sup> from D. Therefore the space between D and F =1.
20. B

**UNIT 10****Word List**

1. ransack(ed)
2. plumage
3. rabble
4. wane(d)
5. perish
6. pretence(s)
7. skirmish
8. renounce
9. rouse
10. incantation
11. mar(s)
12. prodigious
13. gibber(ing)
14. onset
15. surge(d)
16. remnant(s)

**“sc” family**

1. scissors
2. ascent

3. school
4. screwdriver
5. scrumptious

### Using Clues

1. scallop
2. scissors
3. description
4. school
5. descend
6. crescent
7. inscription
8. scarce
9. scientist
10. scent

### Rearrange words

1. screwdriver
2. scenery
3. conscription
4. sculpture
5. prescription

### Synonyms

1. deserving
2. cohort
3. rotate
4. orthodox
5. acceptable
6. lag

### Antonyms

1. reduce
2. compress
3. sufficient
4. exhibit
5. irrelevant
6. inaudible

### Puzzle

17/93

### Word Knowledge

1. engross – to occupy one's attention completely
2. favouritism – the practice of giving special treatment to a person or group
3. horticulture – the art or science of cultivating gardens

### Animals

1. e. fawn
2. d. leveret
3. c. eaglet
4. a. gosling
5. b. foal

### Match the places

1. c. where rubbish is burned
2. e. wood is turned
3. a. water is stored
4. b. chinaware is made
5. d. pigs are reared

### 1 word for 2 or more

1. c. throw aside
2. a. take advantage of
3. b. hard to find or catch
4. e. in low spirits
5. d. bad situation

### Idioms

1. c. genuine
2. e. truthfully; honestly
3. b. share a meal together
4. a. of all shapes, sizes, types, classes, etc.
5. d. rules of behaviour

### GA Test

1. a
2. c
3. b
4. d
5. b
6. b
7. b
8. b
9. a (Children should not play with sharp objects.)
10. BLITHE
11. c
12. d
13. b
14. b
15. six hours
16. a
17. a
18. 50
19. c (all the others can be rearranged into words – act, pig, bit; or the only group without a vowel)
20. c,  $(32 \div 2 - 7 = 9)$



# **Essential Maths**

## **ANSWERS**

Term 1

**YEAR 5**

# UNIT 1

## Numeration

1.

Place Value	Total Value
thousands	7 000
hundred thousands	400 000
ten thousands	90 000
hundreds	200
millions	1000 000
tens	20
ten millions	70 000 000

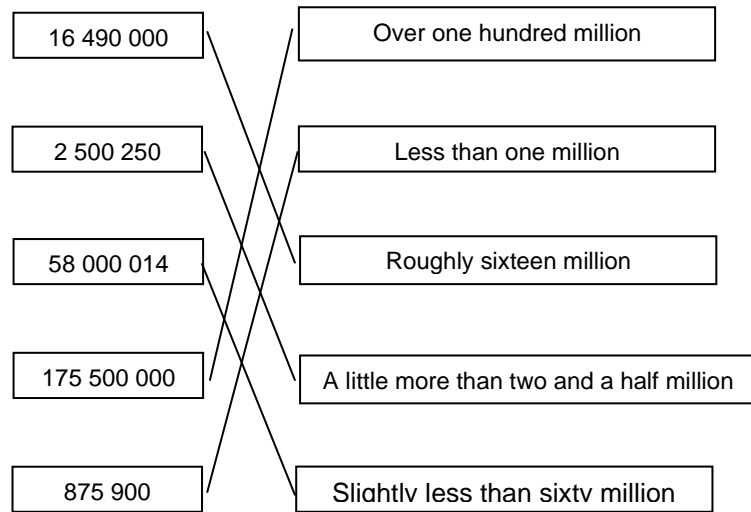
2. a. 717 496                      b. 846 552  
 c. 1 066 284                    d. 844 923  
 e. 1 446 444                    f. 12 410 380
3. a. <                      b. >                      c. >  
 d. >                      e. >
4. a. 809 360                      b. 4 065 089  
 c. 50 638                      d. 73 257  
 e. 30 020 700

## Rounding Off

1.

Rounded	Estimate
6 000 + 5 000	11 000
5 000 + 9 000	14 000
2 000 + 9 000	11 000
37 000 + 8 000	45 000
66 000 + 7 000	73 000
135 000 + 27 000	162 000

2.



3.

Nearest Tens	Nearest Hundreds	Nearest Thousands
42 960	43 000	43 000
125 980	126 000	126 000
697 370	697 400	697 000
9 278 340	9 278 300	9 278 000
59 890	59 900	60 000

## Finding a Number Halfway Between 2 Given Numbers

1. a. 160                      b. 119                      c. 232  
 d. 698                      e. 994

## Ordering Numbers

1. a. 25575605, 25780065, 25870250, 26075056  
 b. 7621505, 7921300, 8051987, 8769213  
 c. 5021486, 5121352, 5296387, 5296837  
 d. 4121852, 6842859, 7932481, 8110425
2. a. 876543                      b. 875210  
 c. 99876                      d. 987630

## Exponential Notation

1. a. 802 009                      b. 400 268  
 c. 34 050 200                      d. 2 403 039  
 e. 706 003
2. a.  $(2 \times 10^3) + (6 \times 10^2) + (7 \times 10) + 3$

- b.  $(3 \times 10^4) + (8 \times 10^3) + (2 \times 10^2) + (5 \times 10) + 3$
- c.  $(3 \times 10^5) + (1 \times 10^4) + (8 \times 10^3) + (3 \times 10^2) + (5 \times 10)$
- d.  $(1 \times 106) + (7 \times 105) + (2 \times 104) + (4 \times 10^3) + (5 \times 10^2) + (3 \times 10) + 2$
- e.  $(1 \times 10^6) + (3 \times 10^5) + (5 \times 10^4) + (7 \times 10^3) + (9 \times 10^2) + (8 \times 10) + 3$

### Addition of Whole Numbers

1. a. 1511935                      b. 1122143  
c. 1038838                      d. 11292428  
e. 4919041                      f. 1722097  
g. 8399985                      h. 10618665  
i. 2334826
2. a. \$644688.43                b. \$5653635.79  
c. \$2069728.30                d. \$9790563.79  
e. \$3241973.30
3. (from the first row)  
a. 8, 8, 6, 1  
b. 9, 8, 6, 3, 4  
c. 7, 6, 2, 7, 3, 8  
d. 8, 4, 6, 9, 0, 4  
e. 7, 0, 8, 9, 0, 1, 3  
f. 8, 3, 4, 8
4.                                      Estimate  
a. 1395379                      a. 1395000  
b. 1005952                      b. 1006000  
c. 265145                        c. 265000  
d. 674540                        d. 674000  
e. 2293099                      e. 2293000  
f. 119277                        f. 119000

### Subtraction of Whole Numbers

1. a. 23177                        b. 65164  
c. 10338                        d. 387775  
e. 299076                        f. 349278  
g. 253193                        h. 329926  
i. 549500
2. (from the first row)  
a. 3, 8 8, 1                      b. 7, 4, 3, 2, 8  
c. 2, 2, 3, 1                      d. 7, 6, 3, 7, 8  
e. 7, 7, 1, 8, 1                      f. 1, 9, 9, 8

3.

a.

NSW	6663700
SA	1522200
Difference	5141500

b.

ACT	323600
NT	200100
Difference	123500

c.

NSW	6663700
TAS	473600
Difference	6190100

d.

NSW	6663700
ACT	323600
Difference	6340100

4. a. \$2085                              b. \$2665  
c. \$5170                              d. \$3175

### Quick Questions

A:

- 100500
- 700
- 149
- 72
- True
- 6400
- 180
- 17
- 7
- 13

B:

- 55
- Octagon
- \$15
- $16\frac{2}{3}$
- 195867
- 5
- 88
- 1240
- \$4
- \$63

## UNIT 2

### Multiplying by 10s, 100s and 1000s

1.

$\times$	<b>10</b>	<b>100</b>	<b>1000</b>
a. 9	90	900	9000
b. 16	160	1600	16000
c. 28	280	2800	28000
d. 49	490	4900	49000
e. 20	200	2000	20000
f. 50	500	5000	50000
g. 100	1000	10000	100000
h. 99	990	9900	99000
i. 184	1840	18400	184000
j. 146	1460	14600	146000
k. 243	2430	24300	243000
l. 311	3110	31100	311000
m. 201	2010	20100	201000

2. a. 3780                      b. 13200  
 c. 8280                        d. 54880  
 e. 122130                      f. 149700  
 g. 135440                      h. 270800  
 i. 859260                      j. 7169920  
 k. 4575540                     l. 1558480
3. a. 2562                        b. 6986  
 c. 3240                         d. 3000  
 e. 6102                         f. 28816  
 g. 14124                        h. 30123  
 i. 179480                      j. 239992  
 k. 270117                      l. 185340

### Multiplying by 2 Digit Numbers

1. a. 8928                        b. 5850  
 c. 10778                        d. 13568  
 e. 39355                        f. 68625  
 g. 22896                        h. 169858  
 i. 86336

2. a. 45                            b. 48  
 c. 37                              d. 78  
 e. 54

3. a. 
$$\begin{array}{r} \$137 \\ \times 89 \\ \hline \$12193 \end{array}$$

b. 
$$\begin{array}{r} \$536 \\ \times 37 \\ \hline \$19832 \end{array}$$

c. 
$$\begin{array}{r} \$1578 \\ \times 19 \\ \hline \$29982 \end{array}$$

d. 
$$\begin{array}{r} \$3560 \\ \times 35 \\ \hline \$124600 \end{array}$$

e. 
$$\begin{array}{r} \$5460 \\ \times 38 \\ \hline \$207480 \end{array}$$

### Multiplication of Numbers up to 5 Digits by 2 Digits

1. a. 251370                      b. 1000584  
 c. 2238422                     d. 905856  
 e. 1520748                     f. 4542145  
 g. 604624                      h. 1876068  
 i. 3292562
2. a. 25                            b. 48  
 c. 33                              d. 78

### Multiplying Decimals by Groups of 10

1.

Number	$\times 10$	$\times 100$	$\times 1000$
a. 9	90	900	9000
b. 27	270	2700	27000
c. 136	1360	13600	136000
d. 3.97	39.7	397	3970
e. 2.08	20.8	208	2080
f. 3.68	36.8	368	3680
g. 4.26	42.6	426	4260
h. 17.9	179	1790	17900
i. 27.64	276.4	2764	27640
j. 35.62	356.2	3562	35620
k. 3.579	35.79	357.9	3579
l. 4.206	42.06	420.6	4206
m. 574.6	5746	57460	574600
n. 305.7	3057	30570	305700

**Quick Questions**

A: 1. \$12

2. 40%

3.  $11\frac{1}{9}$ 

4. 30

5. 80

6. 2400

7.  $\frac{14}{3}$ 

8. 13

9. 6

10. 625

B: 1. 120

2. 120

3. 320

4. 480

5. 144

6. 243

7. 616

8. 990

9. 420

10. 2064

**UNIT 3****Revising 4 Digit Division**

1. a. 671

c. 442r6

e. 530r4

g. 755

b. 921

d. 1246r1

f. 996r2

h. 1429r2

**Division with Fractional Remainders**1. a.  $1416\frac{2}{3}$ c.  $1311\frac{2}{5}$ e.  $1312\frac{1}{3}$ g.  $12193\frac{5}{8}$ b.  $12227\frac{2}{7}$ d.  $14859\frac{3}{5}$ f.  $13364\frac{1}{7}$ h.  $12088\frac{3}{8}$ **Division with Decimal Remainders**

1. a. 5.4

c. 84.25

e. 61.5

g. 71.4

b. 134.8

d. 65.125

f. 108.5

h. 167.5

**Division to 6 Digits**1. a.  $103941\frac{1}{3}$ b.  $90285\frac{3}{7}$ c.  $114203\frac{1}{7}$ e.  $107178\frac{1}{8}$ d.  $50071\frac{7}{9}$ f.  $137731\frac{1}{2}$ 

2. \$25785

**Division to 7 Digits**1. a.  $304441\frac{1}{4}$ c.  $341321\frac{3}{5}$ e.  $419896\frac{1}{2}$ b.  $227340\frac{6}{7}$ d.  $288860\frac{2}{3}$ 

f. 337715

**Dividing by tens**

1. a. 80

d. 500

g. 120

b. 119

e. 150

h. 17380

c. 90

f. 134

2. a. 355.2

c. 18.7

e. 70.1

b. 95.4

d. 78.9

f. 52.7

**Dividing by Powers of Ten**

1.

a.		$\div 10$	$\div 100$	$\div 1000$
b.	9063.1	906.31	90.631	9.0631
c.	183.214	18.3214	1.83214	0.183214
d.	82349	8234.9	823.49	82.349
e.	27	2.7	0.27	0.027
f.	6.014	0.6014	0.06014	0.006014
g.	19.19	1.919	0.1919	0.01919

**Long Division**

1. a. 73

d. 126

g. 79

b. 79

e. 456

h. 409

c. 66

f. 307

**Quick Questions****A:**

1. 45
2. 119
3.  $\frac{1}{2}$
4. 51
5. 143
6. 1131
7. 20
8.  $4\frac{3}{7}$
9. 32
10. 1.07

**B:**

1. 24
2. 40
3. 91
4. 8
5. 54000
6. 80
7. 25
8. 3
9. 150
10. 845

**UNIT 4****Equivalent Fractions**

1. a. 2                      b. 30                      c. 4  
d. 10                      e. 6                      f. 6  
g. 4                      h. 2                      i. 8  
j. 21                      k. 48                      l. 36  
m. 4                      n. 56                      o. 24  
p. 200
2. a. F                      b. T                      c. T  
d. F                      e. T                      f. F  
g. T                      h. F

**Improper Fractions and Mixed Numerals**

1. a.  $1\frac{3}{7}$                       b.  $9\frac{4}{5}$                       c.  $1\frac{7}{13}$   
d.  $9\frac{1}{3}$                       e.  $5\frac{1}{8}$                       f.  $7\frac{7}{8}$   
g.  $17\frac{1}{2}$                       h.  $7\frac{3}{7}$

2. a.  $\frac{29}{8}$                       b.  $\frac{21}{2}$                       c.  $\frac{31}{6}$   
d.  $\frac{92}{3}$                       e.  $\frac{17}{6}$                       f.  $\frac{25}{9}$   
g.  $\frac{113}{11}$                       h.  $\frac{65}{3}$

**Simplifying Fractions**

1. a.  $\frac{1}{2}$                       b.  $\frac{19}{29}$                       c.  $\frac{5}{6}$   
d.  $\frac{2}{3}$                       e.  $\frac{23}{24}$                       f.  $\frac{1}{3}$   
g.  $\frac{1}{25}$                       h.  $\frac{17}{64}$

**Comparing Fractions**

1. a.  $\frac{11}{13}, \frac{7}{13}, \frac{2}{13}$                       b.  $\frac{5}{6}, \frac{2}{3}, \frac{1}{6}$   
c.  $\frac{5}{6}, \frac{7}{12}, \frac{1}{4}$                       d.  $\frac{7}{8}, \frac{7}{10}, \frac{2}{3}$   
e.  $\frac{1}{4}, \frac{1}{5}, \frac{1}{8}$
2. a.  $1\frac{5}{6}, 1\frac{3}{4}, 1\frac{7}{10}, 1\frac{5}{8}$   
b.  $2\frac{1}{4}, 2\frac{1}{5}, 1\frac{7}{8}, 1\frac{5}{6}$   
c.  $7\frac{1}{2}, 5\frac{7}{8}, 4\frac{1}{3}, 3\frac{1}{6}$   
d.  $3\frac{4}{5}, 3\frac{3}{4}, 3\frac{2}{3}, 3\frac{2}{5}$   
e.  $3\frac{1}{5}, 2\frac{1}{2}, 2\frac{1}{4}, 1\frac{7}{8}$

**Adding and Subtracting Fractions**

1. a. 1                      b.  $\frac{1}{2}$                       c.  $\frac{7}{10}$   
d.  $\frac{6}{11}$                       e.  $\frac{4}{5}$                       f.  $\frac{1}{4}$
2. a.  $\frac{7}{8}$                       b.  $\frac{1}{2}$                       c.  $1\frac{1}{10}$   
d.  $\frac{7}{60}$                       e.  $1\frac{1}{12}$                       f.  $\frac{1}{18}$

g.  $1\frac{19}{30}$       h.  $\frac{2}{5}$       i.  $\frac{5}{18}$

j.  $\frac{9}{50}$

3. a.  $8\frac{1}{2}$       b.  $1\frac{3}{4}$       c.  $4\frac{1}{4}$

d.  $6\frac{19}{30}$       e. 8      f.  $2\frac{5}{8}$

g.  $5\frac{1}{5}$       h.  $3\frac{1}{5}$       i. 4

j.  $1\frac{1}{6}$

**Multiplication of Fractions**

1. a.  $\frac{1}{12}$       b.  $11\frac{1}{3}$       c.  $\frac{27}{100}$

d.  $\frac{9}{20}$       e.  $\frac{4}{7}$       f. 24

g.  $\frac{7}{30}$       h.  $\frac{33}{100}$       i.  $\frac{7}{10}$

j.  $\frac{3}{14}$

**Division of Fractions**

1. a.  $3\frac{1}{3}$       b. 24      c.  $\frac{20}{81}$

d.  $\frac{1}{30}$       e. 2      f. 32

g.  $\frac{7}{8}$       h.  $\frac{1}{5}$

**Quick Questions**

**A:**

1.  $202\frac{1}{2}$

2. \$1750

3. 300

4. 33

5. 1

6. 256

7. 68

8. 1800

9. 384

10. 6

**B:**

1.

+	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$
$\frac{2}{3}$	$1\frac{1}{6}$	1	$\frac{11}{12}$	$\frac{13}{15}$
$\frac{3}{5}$	$1\frac{1}{10}$	$\frac{14}{15}$	$\frac{17}{20}$	$\frac{4}{5}$
$\frac{4}{7}$	$1\frac{1}{14}$	$\frac{19}{21}$	$\frac{23}{28}$	$\frac{27}{35}$
$\frac{7}{8}$	$1\frac{3}{8}$	$1\frac{5}{24}$	$1\frac{1}{8}$	$1\frac{3}{40}$

2.

+	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{1}{7}$	$\frac{3}{8}$
$\frac{1}{2}$	$\frac{3}{4}$	$\frac{5}{6}$	$\frac{9}{14}$	$\frac{7}{8}$
$\frac{2}{3}$	$\frac{11}{12}$	1	$\frac{17}{21}$	$1\frac{1}{24}$
$\frac{1}{5}$	$\frac{9}{20}$	$\frac{8}{15}$	$\frac{12}{35}$	$\frac{23}{40}$
$\frac{2}{5}$	$\frac{13}{20}$	$\frac{11}{15}$	$\frac{19}{35}$	$\frac{31}{40}$

3.

X	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{2}{5}$	$\frac{1}{4}$
$\frac{1}{3}$	$\frac{2}{9}$	$\frac{1}{4}$	$\frac{2}{15}$	$\frac{1}{12}$
$\frac{1}{2}$	$\frac{1}{3}$	$\frac{3}{8}$	$\frac{1}{5}$	$\frac{1}{8}$
$\frac{1}{4}$	$\frac{1}{6}$	$\frac{3}{16}$	$\frac{1}{10}$	$\frac{1}{16}$
$\frac{1}{5}$	$\frac{2}{15}$	$\frac{3}{20}$	$\frac{2}{25}$	$\frac{1}{20}$

4.

X	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{1}{9}$	$\frac{2}{11}$
$\frac{4}{5}$	$\frac{1}{2}$	$\frac{3}{5}$	$\frac{4}{45}$	$\frac{8}{55}$
$\frac{1}{4}$	$\frac{5}{32}$	$\frac{3}{16}$	$\frac{1}{36}$	$\frac{1}{22}$
$\frac{2}{3}$	$\frac{5}{12}$	$\frac{1}{2}$	$\frac{2}{27}$	$\frac{4}{33}$
$\frac{1}{2}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{18}$	$\frac{1}{11}$

## UNIT 5

### Decimals

1. a. 61.5                      b. 8.47  
c. 6046.6                    d. 400.6  
e. 0.006
2. a. 50                         b. 0.5  
c. 5                            d. 0.05  
e. 0.005                    f. 50
3. a. 0.3                        b. 2.4  
c. 1.78                       d. 4.05  
e. 5.007                    f. 9.62  
g. 1.368                    h. 0.589
4. a.  $\frac{4}{5}$                         b.  $\frac{27}{100}$   
c.  $\frac{1}{8}$                             d.  $\frac{3}{100}$   
e.  $1\frac{9}{10}$                         f.  $3\frac{7}{100}$   
g.  $7\frac{89}{250}$                     h.  $3\frac{1}{125}$

### Comparing Decimals

1. a. 0.4                        b. 3.06  
c. 0.09                       d. 0.457  
e. 3.2
2. a. T                         b. F                            c. T  
d. F                            e. F                            f. F
3. a. 1.099, 1.19,  $1\frac{2}{10}$ ,  $1\frac{428}{1000}$   
b.  $\frac{99}{100}$ , 0.997, 1, 1.001  
c.  $1\frac{1}{100}$ , 1.111, 11.011, 11.11  
d. 1.04, 1.097, 1.3,  $1\frac{39}{100}$   
e. 21.009, 21.09,  $21\frac{9}{10}$ ,  $21\frac{99}{100}$
4. a. 43.4, 4.55, 4.35, 4.04, 0.434  
b. 6.6, 6.06, 6.006, 0.6, 0.006  
c. 2.01, 2.001, 1.2, 1.02, 1.002  
d. 75.3, 57.3, 7.53, 7.053, 5.73  
e. 311.3, 31.13, 3.13, 3.113, 0.3113

### Rounding Off Decimals

1. a. 2.37                        b. 18.9  
c. 79.302                    d. 9.62  
e. 39.16                      f. 24.61  
g. 72.0013                    h. 59.0012

### Addition and Subtraction of Decimals

1. a. 89.3                        b. 36.2  
c. 265.92                    d. 8.827  
e. 38.728                    f. 28.487  
g. 14.353                    h. 253.438  
i. 50.9                        j. 587.1  
k. 13.082                    l. 612.39  
m. 543.909                   n. 242.73  
o. 17.995                    p. 26.8291

### Multiplication of Decimals

1. a. 0.24                        b. 0.01  
c. 1.216                      d. 1.2036  
e. 2.4036                    f. 0.035  
g. 2.805                      h. 5.84  
i. 0.84                        j. 0.145
2. a. 8                            b. 1960  
c. 865                        d. 8  
e. 64                            f. 9350  
g. 12164                      h. 4.1
3. a. 5625                        b. 35  
c. 2187                        d. 267.6  
e. 64                            f. 2572.5  
g. 4878                        h. 15260
4. a. 39.68                      b. 17.544  
c. 80                            d. 18.275  
e. 3.81                        f. 29.05

### Divisions of Decimals

1. a. 1.2                        b. 0.059625  
c. 6.5                         d. 20.1  
e. 7.6025                    f. 0.437

### Division of decimal by a multiple of 10

1. a. 0.2402                    b. 0.2092  
c. 7.33                        d. 0.0501  
e. 0.273                      f. 0.605  
g. 22.93                      h. 2.5633

### Division of Decimals by a Decimal

1. a. 0.625                      b. 129  
c. 4.14                        d. 216  
e. 60.8                        f. 61  
g. 2431                        h. 800



**Quick Questions**

**A:**

1. 17500000
2.  $\frac{7}{32}$
3. 999900
4. 1.75
5.  $\frac{1}{50}$
6. 54
7. 6.15
8. 1.5
9. 346180
10. tenths

**B:**

1. 4.7
2. 6.5
3. 1.12
4. 5.01
5. 9.21
6. 9.23
7. 3
8. 3.5
9. 1.5
10. 1.04

**UNIT 6**

1. a. rectangular pyramid  
b. cylinder  
c. cube

**Faces, Vertices and Edges**

1.

Name	Faces	Vertices	Edges
cube	6	8	12
cylinder	0	0	0
triangular pyramid	4	4	6
Sphere	0	0	0
Rectangular prism	6	8	12
Pentagonal prism	7	10	15
Triangular prism	5	6	9

2. a. SR, TU, WV  
b. PS, UV, TW  
c. PT, RV, QU  
d. rectangle  
e. 6

**Drawing solids from different views**

1.

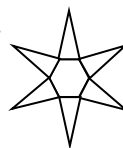
	Top view	Front view	Side view
a)			
b)			
c)			
d)			
e)			

**Nets of 3D objects**

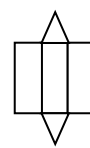
1.

a. cylinder	b. triangular pyramid	c. square pyramid
d. rectangular pyramid	e. pentagonal prism	f. rectangular prism

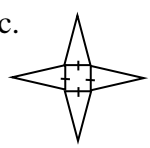
2. a.



b.



c.



**Investigating other 3D objects**

Faces	Vertices	Edges
4	4	6
10	16	24
8	6	12
12	20	30
20	12	30

**Quick Questions**

A:

- |                     |           |
|---------------------|-----------|
| 1. $7\frac{16}{27}$ | 2. 10.774 |
| 3. 441              | 4. 81     |
| 5. 0.0018           | 6. 0.0625 |
| 7. 10               | 8. 7500   |
| 9. 2                | 10. 0.505 |

B:

1. 6000
2.  $\frac{1}{2}$
3. 6000
4. 4000
5. 25
6. 300
7. 20 000
8. 2 000 000
9. 3000
10. 2000

**UNIT 7****Number Patterns**

1. a. 14, 17, 20      Rule: add 3  
b. 48, 96, 192      Rule: multiply by 2  
c. 28, 23, 18      Rule: Subtract 5  
d. 50000, 500000, 5000000  
    Rule: multiply by 10
2. a. 10, 1, 0.1  
b. 18, 6, 2  
c. 972, 2916, 8748  
d. 12, 7, 2  
e. 31, 36, 41

**Describing Geometric Patterns**

1. a. 8, 12, 16, 20, 24  
    Rule:  $s = d \times 4$ , 48 sides  
b. 12, 18, 24, 30, 36  
    Rule:  $s = h \times 6$ , 180 sides  
c. 9, 13, 17, 21, 25  
    Rule:  $d = c \times 4 + 1$ , 81 sides  
d. 14, 21, 28, 35, 42  
    Rule:  $s = h \times 7$ , 105 sides

e. 5, 7, 9, 11, 13

Rule:  $m = t \times 2 + 1$ , 21 sides

f. 9, 13, 17, 21, 25

Rule:  $m = h \times 4 + 1$ , 121 sides**Missing Numbers**

1. a. 55      b. 16      c. 10  
d. 2      e. 3      f. 26  
g. 4      h.      i. 7  
j. 5      k. 4      l. 5  
m. 17      n. 4      o. 5  
p. 9
2. a. 70      b. 50      c. 25  
d. 15      e. 40      f. 65  
g. 15      h. 38      i. 192  
j. 18      k. 16      l. 25  
m. 68      n. 35      o. 50  
p. 45

**Substitution**

1. a. 90      b. 5      c.  $\frac{1}{3}$   
d. 4      e. 5      f. 3  
g. 4
2. a. 4, 6, 8, 10, 12, 14, 16  
b. 11, 12, 13, 14, 15, 16, 17  
c. 30, 36, 42, 48, 54, 60, 66  
d. 10, 11, 12, 13, 14, 15, 16  
e. 3, 5, 7, 9, 11, 13, 15  
f. 4, 6, 8, 10, 12, 14, 16
3. a. 8      b. 15      c. 20  
d. 23      e. 10      f. 24  
g. 71      h. 60      i. 5  
j. 20
4. a.  $\square = 8$ ,       $\bigcirc = 9$   
     $9 - 7 = 2$ ,  $9 + 7 = 16$   
     $7 \times 8 = 56$ ,  $7 + 8 + 9 = 24$   
b.  $5 \times 7 = 35$   
     $7 \times 6 = 42$   
     $6 \times 5 = 30$   
     $37 - 6 = 31$   
     $42 - 6 = 36$   
     $(5 + 7) \times 6 = 72$

**Equal Number Sentences**

- |         |         |         |
|---------|---------|---------|
| a. 5, 5 | b. 7, 7 | c. 7, 7 |
| d. 8, 8 | e. 8, 8 | f. 3, 3 |
| g. 8, 8 | h. 6, 6 | i. 7, 7 |
| j. 9, 9 |         |         |
- |       |        |      |
|-------|--------|------|
| a. 20 | b. 999 | c. 4 |
| d. 13 | e. 7   | f. 6 |
| g. 5  | h. 23  |      |

**Inverse Operations**

- |          |          |          |
|----------|----------|----------|
| a. false | b. false | c. true  |
| d. true  | e. true  | f. true  |
| g. false | h. true  | i. false |
| j. false |          |          |
- |                                    |
|------------------------------------|
| a. correct, $145 \div 9 = 15$ kg   |
| b. incorrect, $160 \times 4 = 640$ |
| c. correct, $128 + 67 = 195$       |
| d. correct, $17 \times 3 = 51$     |
| e. incorrect, $36 \times 4 = 144$  |

**Describing Problems**

- A.
- 12
  - \$10.10
  - \$1106
  - \$175.5
  - \$1.4
- B.
- c, \$ 20.40
  - d, \$5.60
  - d, 3900 m
  - c, \$47.30
  - d, \$6

**Quick Questions**

- |                     |                    |
|---------------------|--------------------|
| A.                  | B.                 |
| 1. 57               | 1. 2873.21         |
| 2. 2                | 2. 2000            |
| 3. 349              | 3. 45 minutes      |
| 4. $\frac{91}{100}$ | 4. 1700            |
| 5. 150              | 5. 80%             |
| 6. $360^\circ$      | 6. 5.15            |
| 7. 2300             | 7. 40              |
| 8. 0.25             | 8. \$84            |
| 9. 134              | 9. 31              |
| 10. 14.19105        | 10. $4\frac{1}{4}$ |

**UNIT 8****Estimating and finding the volume of rectangular prisms**

- |                      |                      |                      |
|----------------------|----------------------|----------------------|
| a. $27 \text{ cm}^3$ | b. $36 \text{ cm}^3$ | c. $24 \text{ cm}^3$ |
| d. $16 \text{ cm}^3$ | e. $20 \text{ cm}^3$ | f. $40 \text{ cm}^3$ |
- |                        |          |           |
|------------------------|----------|-----------|
| a. 2 cm                | b. 5 cm  | c. 9 m    |
| d. $1190 \text{ cm}^3$ | e. 4 m   | f. 10.5 m |
| g. $0.36 \text{ cm}^3$ | h. 4.5 m |           |
- |                       |                        |
|-----------------------|------------------------|
| a. $672 \text{ cm}^3$ | b. $1080 \text{ cm}^3$ |
|-----------------------|------------------------|

**What is capacity?**

- |          |         |        |
|----------|---------|--------|
| a. 2000  | b. 2080 | c. 1.8 |
| d. 8.9   | e. 16   | f. 20  |
| g. 825   | h. 15   | i. 975 |
| j. 14000 |         |        |
- |                       |        |
|-----------------------|--------|
| a. $216 \text{ cm}^3$ | 216 mL |
| b. $192 \text{ cm}^3$ | 192 mL |
| c. $96 \text{ cm}^3$  | 96 mL  |
| d. $252 \text{ cm}^3$ | 252 mL |

**What is Mass**

- |          |         |         |
|----------|---------|---------|
| a. 6     | b. 14   | c. 0.99 |
| d. 2     | e. 1650 | f. 0.55 |
| g. 6500  | h. 24   | i. 9800 |
| j. 7.805 | k. 3205 | l. 8.4  |

**Computations involving +, -,  $\times$ ,  $\div$** 

- |                |
|----------------|
| a. 84 kg 133 g |
| b. 7 kg 425g   |
| c. 5 t 424 kg  |
| d. 3 kg 988 g  |
| e. 3 t 678 kg  |
- |                 |
|-----------------|
| a. 35 kg 52 g   |
| b. 139 kg 428 g |
| c. 60 t 392 kg  |
| d. 6 kg 829 g   |
| e. 4 t 687 kg   |
| f. 1 t 334 kg   |

**Gross Mass and Net Mass**

- |           |           |
|-----------|-----------|
| a. 1030 g | b. 2.2 kg |
| c. 120 g  | d. 730 g  |
| e. 2330 g | f. 3.1 kg |
| g. 348 g  |           |

**Relationship between volume, capacity and mass**

1. 180 cm<sup>3</sup>
2. a. 146.25 L    146.25 kg  
b. 252 L        252 kg


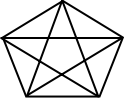
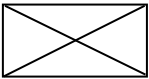
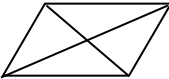
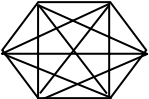
**Quick Questions**

- A.
- |                   |           |
|-------------------|-----------|
| 1. 23459          | 2. 5600 m |
| 3. $\frac{4}{5}$  | 4. 2      |
| 5. $4\frac{1}{2}$ | 6. 300 mL |
| 7. 16             | 8. 5      |
| 9. 19681          | 10. 48    |

- B.
- |                     |           |
|---------------------|-----------|
| 1. $\frac{1}{4}$    | 2. 25%    |
| 3. 700              | 4. 10 000 |
| 5. $\frac{14}{5}$   | 6. 250 kg |
| 7. $2\frac{11}{20}$ | 8. 750 g  |
| 9. 40               | 10. 1880  |

**UNIT 9**

**Polygons and Diagonals**

- |   |   |
|---|---|
| 1. a. 2   | b. 5  |
|  |  |
| c. 2  | d. 2  |
|  |  |
| e. 9  |   |
|  |   |

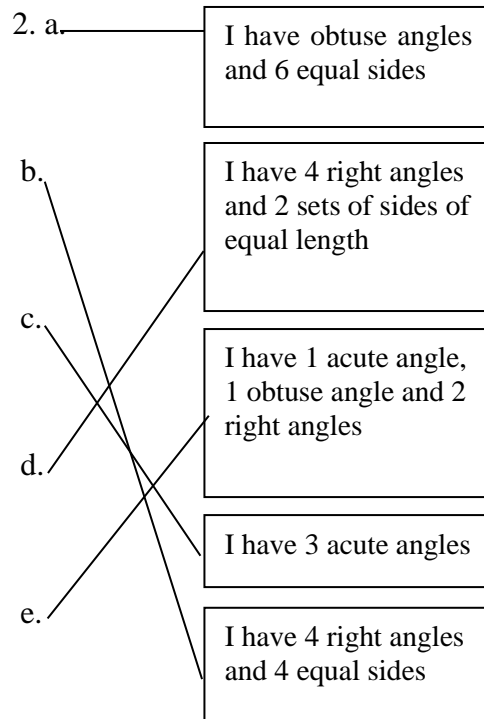
**Angle Facts**

- |              |           |           |
|--------------|-----------|-----------|
| 1. a. obtuse | b. acute  | c. obtuse |
| d. right     | e. reflex | f. obtuse |
| g. straight  |           |           |

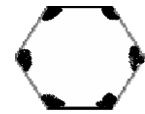
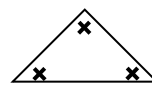
2D shapes and their properties

Triangles

- |                  |                |
|------------------|----------------|
| 1. a. 4, 4, 2, 4 | b. 3, 3, 0, 3  |
| c. 4, 4, 2, 1    | d. 6, 6, 9, 6  |
| e. 4, 4, 2, 2    | f. 4, 4, 2, 0  |
| g. 5, 5, 5, 5    | h. 8, 8, 20, 8 |



- |               |            |
|---------------|------------|
| 3 a. triangle | b. hexagon |
|---------------|------------|

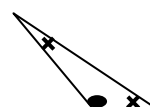


- c. rhombus

- d. trapezium



- e. triangle



4. a. equilateral                      b. isosceles  
 c. scalene                              d. right angled  
 e. acute                                  f. obtuse/isosceles

5.

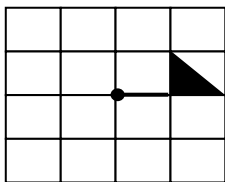
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✓	✓	X	✓	X	X
✓	✓	✓	✓	✓	✓
✓	✓	X	✓	X	X
✓	✓	✓	✓	X	X
✓	✓	✓	✓	X	X
✓	✓	✓	✓	X	X

**Moving shapes**

Rotation (Twisting Movement)

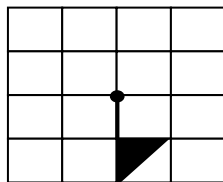
1.

a)



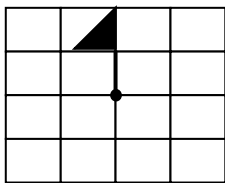
90°

b)



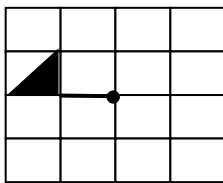
180°

c)



270°

e)



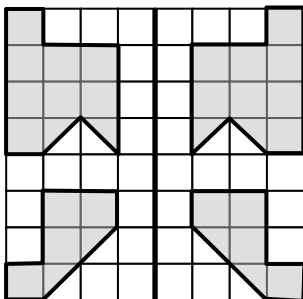
90°

2.

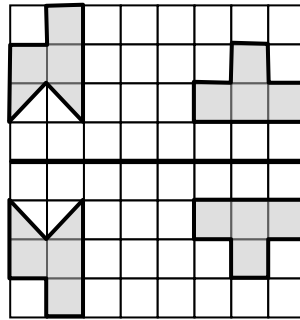
- a. 45°  
 b. 270°  
 c. 360°  
 d. 90°

Reflection (Mirror movement)

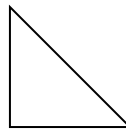
1. a.



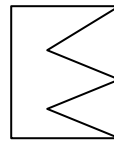
b.



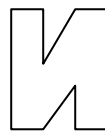
2. a.



b.

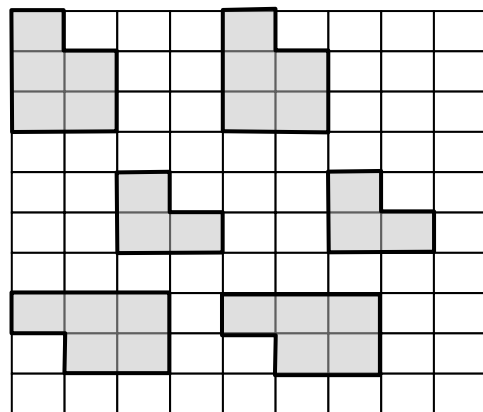


c.



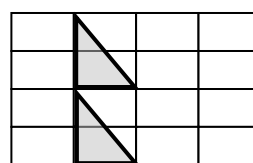
Translation (Straight line movement)

1.



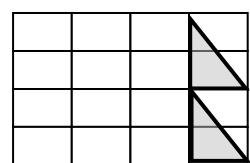
2.

a.



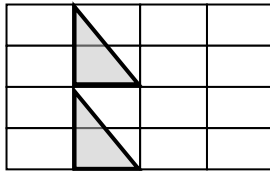
2 units down

b.



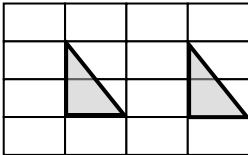
2 units down

c.



2 units up

d.



2 units left

Rotational Symmetry

1. (H), (N), (Z)

2. a), b), d), e), f), h)

3 a. 3                      b. 4  
 c. 6                      d. 8  
 e. 5

Quick Questions

A.

1. 10
2. 60
3.  $7\frac{3}{4}$
4. 126
5. 0.4
6.  $\frac{13}{20}$
7. 324
8. 330
9. 5.305 , 3.35 , 3.335 , 3.035
10. 7700

B.

- a)  $70^\circ$  ,  $70^\circ$  ,  $110^\circ$  , 8 cm , 8cm, 8cm
- b)  $90^\circ$  ,  $90^\circ$  ,  $90^\circ$  ,  $90^\circ$  , 10 cm , 10cm
- c)  $90^\circ$  ,  $90^\circ$  ,  $90^\circ$  ,  $90^\circ$  , 12 cm , 8 cm
- d)  $68^\circ$  ,  $112^\circ$  ,  $68^\circ$  , 5 cm , 9 cm

**UNIT 10**Converting Units of Length

1. a. m                      b. m  
 c. mm                    d. m  
 e. km                     f. mm /cm
- 2 a. 20                    b. 60  
 c. 80                     d. 50
- 3 a. 700                    b. 380  
 c. 6000                  d. 2680  
 e. 90                      f. 8600  
 g. 24                     h. 0.069  
 i. 5.2                     j. 9  
 k. 9000                  l. 26
4. a. 500 m                b. 6.2 m  
 c. 40 cm                d. 8 mm  
 e. 320 cm                f. 0.15 cm

Perimeter of Regular and Irregular ShapesPerimeter of Regular Shapes

1. a. 20 cm                b. 42 cm  
 c. 32 cm                d. 25 cm

Perimeter of irregular shapes

1. a. 24 cm                b. 50 cm  
 c. 44 cm                d. 36 cm  
 e. 60 cm

Definition of AreaArea of a Rectangle

- 1 a.  $60 \text{ cm}^2$   
 b.  $464 \text{ cm}^2$
- 2 a.  $192 \text{ cm}^2$   
 b.  $168 \text{ m}^2$   
 c. 5 cm  
 d. 15 cm  
 e. 6 cm

Area of a Square

1. a.  $196 \text{ cm}^2$                       b.  $576 \text{ cm}^2$
- 2 a.  $12.25 \text{ cm}^2$   
 b.  $225 \text{ m}^2$   
 c.  $42.25 \text{ cm}^2$

- 3 a. 12 cm  
b. 15 cm  
c. 20 cm

**Area of a Triangle**

- 1 a. 24 cm<sup>2</sup>  
b. 108 cm<sup>2</sup>  
c. 70 cm<sup>2</sup>  
d. 81 cm<sup>2</sup>
- 2 a. 70 cm<sup>2</sup>  
b. 48 m<sup>2</sup>  
c. 46000 mm<sup>2</sup>  
d. 6 m  
e. 88 cm  
f. 16 cm  
g. 4 cm  
h. 3.6m  
i. 3 mm  
j. 4.5 cm

**Area of a Parallelogram**

- 1 a. 117 cm<sup>2</sup>  
b. 66 cm<sup>2</sup>  
c. 52.8 cm<sup>2</sup>  
d. 18.49 cm<sup>2</sup>  
e. 57.12 cm<sup>2</sup>

**Irregular Areas**

- 1 a. 164 cm<sup>2</sup>  
b. 285 cm<sup>2</sup>  
c. 5100 cm<sup>2</sup>  
d. 60 cm<sup>2</sup>  
e. 125 cm<sup>2</sup>
- 2 a. 91 cm<sup>2</sup>  
b. 120 cm<sup>2</sup>  
c. 164 cm<sup>2</sup>  
d. 292.5 cm<sup>2</sup>  
e. 199 cm<sup>2</sup>

**Quick Questions**

- A.
1. DXLIX
  2. 1954
  3. 9520
  4.  $\frac{1}{8}$
  5. 3600
  6. 180°
  7. 5.6
  8. 460,000
  9. 82
  10. 625

- B.
1. d
  2. a
  3. b
  4. a
  5. c
  6. b
  7. c
  8. a
  9. b
  10. a

# **Enrich Maths**

## **ANSWERS**

Term 1

**YEAR 5**



## UNIT 1

### Problem Solving

- 8 km
- 73.8 m
- 548 km
- \$19020
- 47.75 seconds
- 76 bottles
- 92 m
- 13
- 114
- 1.15 m
- 950 mL

### Extension

- \$2.25
- 36 cm
- 30 L
- 16
- \$36
- 10
- 756000 balls,  $3 \times 5 \times 5 \times 4 \times 12 \times 70 \times 3$
- 585
- \$1000
- \$3.50

## UNIT 2

### Problem Solving

- yes
- \$102
- 189 trees
- \$14691.50
- \$525
- \$3100, perimeter is 124 m, need 620 posts
- 10.12 m
- 9.405 kg
- \$14.10
- 70 m

### Extension

- 4, 6, 8
- 6
- 2 kg for \$3.16
- 116 km
- 57.4 m
- 7,  $\frac{44.2 - 3 \times 6.8}{3.4}$
- 17 years 10 months
- Young Jun \$15/hr, Ming Sui \$28.13/hr
- 20
- \$858.40

## UNIT 3

### Problem Solving

- 12 m
- 13 tickets
- 95 km/h
- 100
- 1.25 kg
- \$85050,  
 $(0.75 \times 1620 - 0.15 \times 1620) \times 50 + (0.15 \times 1620) \times 150$
- 9 buses
- \$51.17
- 760 g
- 27 PPG

### Extension

- 323, 17
- 3
- 857.5 kJ
- 13.97 cm
- \$3027
- 155.56 cm
- 62
- \$102, buy-\$102, sell-\$204
- 2.4 km/h

## UNIT 4

### Problem Solving

- $\frac{3}{4}$  kg
- 632 mL
- 600
- a.  $\frac{4}{9}$       b.  $\frac{15}{32}$
- 45
- 44 km
- \$880
- \$1142.50
- a.  $\frac{5}{8}$       b. 50      c. 25%

### Extension

- 10
- 720
- \$12000

4. 150 mL
5. 1.2 ha
6. a.  $\frac{7}{15}$       b.  $\frac{7}{18}$
7. \$38.55
8. 3168
9.  $\frac{1}{12}$

## UNIT 5

---

### Problem Solving

1. 459
2. 57.7
3. 625 km/h
4. 150 kg
5. Fred, 1.6 L
6. \$30.32
7. \$12.50
8. 15120 cm<sup>3</sup> or 0.01512 m<sup>3</sup>
9. \$66.35
10. No, 28 minutes late

### Extension

1. 25%
2. \$466.67
3. 42°C
4. 13 mins 35 seconds
5. 8.25 m
6. Hugo
7. \$16000, 8000 coins
8. 4.5625
9. 50 g

## UNIT 6

---

### Problem Solving

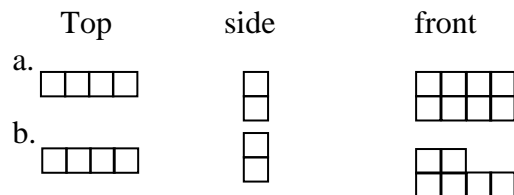
1. 96.25 cm<sup>3</sup>
2. \$1822.50
3. 13
4. 6041 cm<sup>3</sup>
5. a. 5181 cm<sup>3</sup>  
b. 512 cm<sup>3</sup>  
c. 1505 cm<sup>3</sup>
6. 15.7 cm

### Extension

1. 15.04 cm<sup>2</sup>
2. 2 cm
3. 1.2m<sup>3</sup>
4.
  - a. 1050 cm<sup>3</sup>
  - b. 3 m
  - c. 0.7 cm
  - d. 8 cm
  - e. 10 cm
  - f. 1.75 m
  - g. 630 mm<sup>3</sup>

5. 174.79 cm<sup>3</sup>

6.



7. 1080
8. a. D      b. C
9. Student's own answer

## UNIT 7

---

### Problem solving

1. 8 (255 ÷ 4 = 63 r3, 3<sup>rd</sup> number is 8)
2. 6 (2008 ÷ 4 = 502, No remainder = 6)
3. 50 (1 × 50 = 50)
4. 720 (6 × 5 × 4 × 3 × 2 × 1 = 720)
5. 96 (8 × 4 × 3 = 96)

### Extension

1. Every place which has a letter has 26 possibilities. Every place which has a number has 10 possibilities.  
∴ total combinations would be given by the equation: 26 × 26 × 10 × 10 × 26 × 26
2. W = 8, X = 4, Y = 9, Z = 3  
From the question  
W = 2X, W + X = Y + Z  
(W + X) + (Y + Z) = 24  
∴ W + X + W + X = 24  
2W + 2X = 24, 4X + 2X = 24  
6X = 24, X = 4

$$W = 2X = 8$$

$$Y + Z = W + X = 12$$

$$3Z + Z = 12, Z = 3$$

$$Y = 3Z, 3Z = 9$$

$$\therefore W = 8, X = 4, Y = 9, Z = 3$$

3. There should be 7 addition signs, as shown below:

$$9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 = 99$$

4.  $197\,299$  sets  $\times 4$  moves  $\times 20$  seconds  
 $= 1578\,3920$  seconds or  $263065$  minutes  
 and  $20$  seconds or  $4384$  hours,  $25$  mins  
 and  $20$  sec or  $182$  days,  $16$  hours,  $25$   
 mins and  $20$  sec

5. 78

First person gives 12 high five's

Second person gives 11 more

Third person gives 10 more

$$12 + 11 + 10 + 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 = 78$$

6. 13 questions right:  $7 \times 13 = 91$  points  
 2 questions wrong =  $2 \times -2 = -4$  points  
 $\therefore 20 - 13 - 2 = 5$  questions omitted

7. 7

Let the number be  $x$ :

$$(x+3) \times 4 = 2x + 26$$

$$4x + 12 = 2x + 26$$

$$2x = 14$$

$$x = 7$$

$\therefore 7$  is the number

8. 350 km

Since the cost is less than 90, it was hired for 1 day.

$$\therefore \text{cost of kilometres} = 87 - 45 = \$42.00$$

Number of kilometres driven

$$= \frac{4200}{12} = 350 \text{ km}$$

9. James: \$6.25, Brad: \$18.75, Tim: \$75

Let the amount James gets =  $x$

$\therefore$  Brad gets  $3x$

$\therefore$  Tim gets  $3x \times 4 = 12x$

$$x + 3x + 12x = \$100.00$$

$$16x = \$100.00$$

$$x = \$6.25$$

Therefore James;

gets  $x = \$6.25$

Brad gets  $3x = \$18.75$

Tim gets  $12x = \$75.00$

10. There were 29 20c coins and 39 50c coins.

Let the amount of 20c coins be  $x$

$\therefore$  amount of 50c coins =  $68 - x$  now,

$$20x + 50(68 - x) = 2530$$

$$20x + 3400 - 50x = 2530$$

$$\therefore 30x = 870$$

$$x = 29$$

$$\therefore 68 - x = 39$$

$\therefore$  there were 29 20c coins and 39 50c coins.

11. Boys' age = 15

Women's age = 75

Let the grandsons age =  $x$  years

$$\therefore 5x = x + 60$$

$$4x = 60$$

$$x = 15 \text{ years}$$

$$5x = 75 \text{ years}$$

$\therefore$  Boys' age = 15

woman's age = 75

12.  $x = 3$

Let the boys age =  $x$

Brother's age =  $4x$

In 6 years,  $4x + 6 = 2(x + 6)$

$$4x + 6 = 2x + 12$$

$$2x = 6$$

$$x = 3$$

$\therefore$  The boy is 3 years old

13. First number  $x = 90$

Last number =  $x + 22 = 112$

Let the first number be  $x$

$\therefore$  the 23 numbers are:  $x, x+1, x+2, x+3, \dots, x+22$  now,

$$x + (x+1) + (x+2) + (x+3) + \dots +$$

$$(x+22) = 2323$$

$$23x + 253 = 2323$$

$$23x = 2070$$

$$x = 90$$

First number =  $x = 90$

Last number =  $x + 22 = 112$

14. Let the number of students =  $x$

$\therefore$  students payment =  $x \times x = x^2$

students contribution =  $\$1000 - \$100 = \$900$

$$x^2 = 900$$

$$x = \sqrt{900}$$

$$x = 30$$

$\therefore$  there were 30 students

15. 11 paces

let the number of paces =  $x$ 

$$17 + \frac{6x}{2} = 12 + 9 - 15 + 4x$$

$$17 + 3x = 6 + 4x$$

$$x = 11$$

 $\therefore$  11 paces

## UNIT 8

### Problem solving

- 256 cm<sup>2</sup>
- 8100 L
- 100 g
- 25
- $\left(\frac{60 \times 60 \times 24 \times 7}{7} \times 11\right) \text{mL}$

### Extension

- $5 \times 6 \times 13 \times 72 = \$28080$
- total mass of 3 boys = 120 kg
  - total mass of 4 boys =  $45 \times 4 = 180$  kg
  - mass of the 4<sup>th</sup> boy =  $180 - 120 = 60$  kg
- length of painting =  $115 - 10 = 105$  cm
  - breadth of painting =  $85 - 10 = 75$  cm
  - Area =  $105 \times 75 = 7875$  cm<sup>2</sup>
- mass of 24 bottles =  $9.2 - 0.8 = 8.4$  kg  
mass of 1 bottle:  $8.4 \div 24 = 0.35$  kg = 350g
- Perimeter =  $(5 + 10) \times 2 = 30$  cm  
Area of 1 small rectangle =  $\frac{150}{3} = 50$  cm<sup>2</sup>  
Let the length =  $x$   
 $\therefore$  breadth  $2x$   
Area = 50 cm<sup>2</sup>  
 $2x^2 = 50$   
 $x^2 = 25$   
 $x = 5$  cm  
 $\therefore$  Perimeter =  $(5 + 10) \times 2 = 30$  cm
- 10 cubes  
volume of 1 cube =  $2^3 = 8$  cm<sup>3</sup>  
number of cubes =  $2 \times 2 \times 2 + 2 = 10$   
total volume =  $10 \times 8 = 80$  cm<sup>3</sup>

7.  $[(5 \times 5) - (3 \times 3)] \times 8 = 128$  cubes

8. cubes that can be placed:

$$\text{along the length} = \frac{10}{2} = 5$$

$$\text{along the width} = \frac{7}{2} = 3.5, \text{ ie } 3$$

$$\text{along the height} = \frac{8}{2} = 4$$

$$\therefore \text{cubes that can be fit} = 4 \times 3 \times 5 = 60$$

$$\text{cubes already there} = 7$$

$$\therefore \text{cubes needed} = 60 - 7 = 53$$

9. cubes already there = 24

$$\text{total cubes needed} = 5 \times 5 \times 5 = 125$$

$$\therefore \text{more needed} = 125 - 24 = 101$$

10. mass of 1 tin of milk =  $625 - 150 = 475$  g

$$\text{total mass} = 4 \times 475 + 625 = 2525 \text{ g} = 2.525 \text{ kg}$$

11. Let the mass of the son =  $x$ 

$$\therefore 5x = x + 36 \quad x = 9$$

$$\text{Total mass} = 5x + x = 6x = 54 \text{ kg}$$

12. Let the capacity of each basin =  $x$ 

$$\therefore \text{capacity of pail} = 2x$$

$$x + 4 \times 2x = 27 \text{ L}, 9x = 27 \text{ L}, x = 3 \text{ L}$$

$$\therefore \text{capacity of each pail} = 6 \text{ L}$$

13. volume of pool

$$= 28 \times 12 \times 12 = 672 \text{m}^3$$

$$\text{Capacity} = 672000 \text{ L or } 672 \text{ kilolitres}$$

14. volume of box =  $40 \times 20 \times 15 = 12000$  cm<sup>3</sup>

$$\therefore \text{capacity} = 12 \text{ L}$$

15. Let the weight of 1 jar =  $x$ Let the weight of water when the jar is full =  $y$ 

$$\text{Total weight} = 580 \text{ g}$$

$$\text{weight of jar A: weight of jar B} = 14:15$$

$$\text{Jar A: } 280 \text{ g, Jar B: } 300 \text{ g}$$

which means

$$x + \frac{1}{2}y = 280, x + \frac{3}{5}y = 300$$

$$\frac{3}{5}y - \frac{1}{2}y = 300 - 280, \frac{1}{10}y = 20, y = 200$$

$$x = 280 - \frac{1}{2} \times 200$$

$$x = 180$$

16.

a) Length of each side  $\sqrt[3]{216 - 189} = 3$  cm

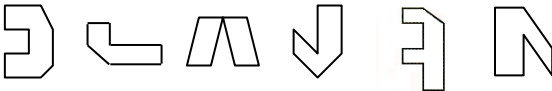
b) Area =  $(6 \times 6) - (3 \times 3) = 36 - 9 = 27$  cm<sup>2</sup>

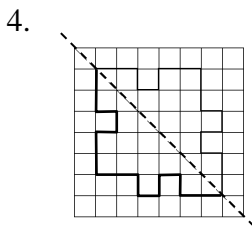
## UNIT 9

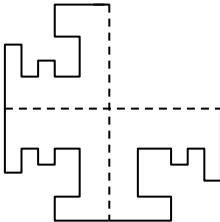
### Problem Solving

- 37
- 24
- $35 \left( \frac{\text{No. of sides} \times (\text{No. of sides} - 3)}{2} \right)$
- Width = 3, length = 9
- Side D
- $65^\circ$
- $\frac{1}{4}$
- 31

### Extension

- 6009
- a)
- 



- c)
- 

- b)
- a)
- d)
- d)
- circle
- d)

## UNIT 10

### Problem Solving

- 26
- 0.6 m
- 2480 m
- 24 cm
- 300 m
- 1216 tiles
- $68 \text{ m}^2$
- 8 cm
- 10 cm
- $84 \text{ m}^2 (12 \times 7)$

### Extension

- $(40 + 30) \times 2 = 140 \text{ cm}$
- Let  $AF = x$   
 $x^2 - \left(\frac{1}{2}x\right)^2 = 243, \quad x^2 - \frac{x^2}{4} = 243$   
 $\frac{3x^2}{4} = 243, \quad x^2 = 324$   
 $x = 18\text{cm} \quad \therefore AF = 18\text{cm}$
- area of one corner =  $\frac{1}{2} \times 6 \times 5 = 15 \text{ cm}^2$   
 area of whole paper =  $20 \times 22 = 440 \text{ cm}^2$   
 remaining area =  $440 - 15 \times 4 = 380 \text{ cm}^2$
- area of garden  
 $= (30 \times 21) - (5 \times 6) = 600 \text{ m}^2$   
 Cost =  $600 \times 8 = \$4800$
- other side =  $\frac{72}{6} = 12 \text{ cm}$   
 $\therefore \text{Perimeter} = (12 + 8) \times 2 = 40 \text{ cm}$
- length of side of triangle  
 $= \frac{144}{12} = 12 \text{ cm}$   
 $\therefore \text{length and breadth of rectangles} = 12, 24$   
 $\therefore \text{Area} = 12 \times 24 = 288 \text{ cm}^2$
- They are all equal  
 a)  $\frac{1}{2}$     b)  $\frac{1}{2}$     c)  $\frac{1}{2}$     d)  $\frac{1}{2}$     e)  $\frac{1}{2}$
- 19 (7 ways to form squares and 12 ways to form rectangles)
  - 16, 8

# **Creative Problem Solving Answer**

Term 1

**YEAR 5**

## UNIT 1

### Conversions

Percentage	Decimal	Fraction (Out of 100)	Simplified Fraction
30%	0.3	$\frac{30}{100}$	$\frac{3}{10}$
<b>15%</b>	<b>0.15</b>	$\frac{15}{100}$	$\frac{3}{20}$
78%	<b>0.78</b>	$\frac{78}{100}$	$\frac{39}{50}$
<b>60%</b>	<b>0.6</b>	$\frac{60}{100}$	$\frac{3}{5}$
<b>23%</b>	0.23	$\frac{23}{100}$	$\frac{23}{100}$
8%	<b>0.08</b>	$\frac{8}{100}$	$\frac{2}{25}$
<b>75%</b>	<b>0.75</b>	$\frac{75}{100}$	$\frac{3}{4}$
<b>37.5%</b>	0.375	$\frac{37.5}{100}$	$\frac{3}{8}$
<b>78%</b>	<b>0.78</b>	$\frac{78}{100}$	$\frac{39}{50}$
43.5%	<b>0.435</b>	$\frac{43.5}{100}$	$\frac{87}{200}$

### Circles

1.  $37\frac{5}{7}$       2.  $72\frac{2}{7}$       3.  $56\frac{4}{7}$

### General Problems

1. \$144                      2. 504  
 3. 400 m                  4. 9000 cm<sup>3</sup>  
 5. 136 cm                  6. 244 m  
 7. 9:04 pm Singapore time

## UNIT 2

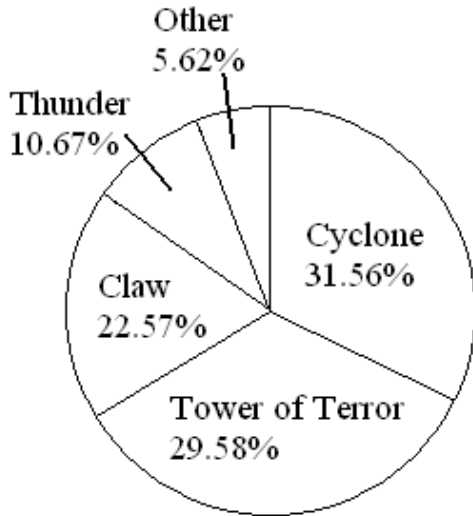
### Comparing Prices

Shop	Price	Rank
Woolworths	\$4.60	7
Aldi	\$4.20	5
<u>Food for Less</u>	\$4.00	3
<u>Paddy's Market</u>	\$3.90	2
Franklins	\$4.40	6
<u>Coles</u>	\$4.10	4
<u>Parklea Markets</u>	\$3.85	1

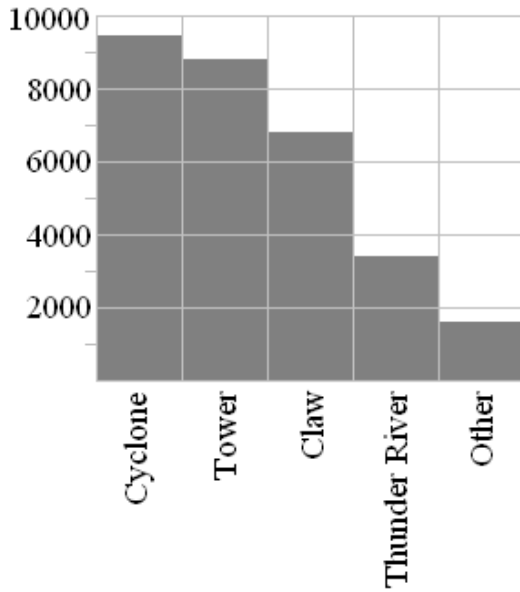
1. \$290.50  
 2. \$7.50  
 3. Underlines shown above. (All prices less than \$4.15)

**Graphs**

1.



2.



**General Problems**

- \$4.40
- \$137
- 119.925 L
- \$37.40
- 14 cm, 7 cm
- \$126
- 63 954

**UNIT 3**

**Racing**

Yes

Time (seconds)	Abigail	Olivia
10	0	40
20	0	80
30	50	120
40	100	160
50	150	200
60	200	240
70	250	280
80	300	320
90	350	360
<b>100</b>	<b>400</b>	<b>400</b>
110	450	440

20 metres apart

**Income Tax**

Name	Annual Income	Tax	After Tax Income
Hannah	50 450	<b>9 735</b>	<b>40 715</b>
Anthony	32 060	<b>4 218</b>	<b>27 842</b>
Emily	60 356	<b>12 706.8</b>	<b>47 649.20</b>
Ethan	28 700	<b>3 405</b>	<b>25 295</b>
Chris	84 710	<b>20 984</b>	<b>63 726</b>
Andrew	153 420	<b>48 639</b>	<b>104 781</b>
Sophia	29 680	<b>3 552</b>	<b>26 128</b>
Madison	31 000	<b>3900</b>	<b>27 100</b>

**General Problems**

- 136
- \$67.78
- 505
- 10.4 m
- 63 kg
- \$120
- 10 am



## UNIT 4

---

### Polygons

1.  $720^\circ$
2.  $540^\circ$
3.  $1440^\circ$
4.  $1800^\circ$

### Minimums, Maximums, Medians and Averages

1. Minimum – 2  
Maximum – 28  
Median – 13  
Average – 13.2
2. Minimum – 3  
Maximum – 64  
Median – 21  
Average – 29
3. Minimum – 11  
Maximum – 99  
Median – 34  
Average – 49

### General Problems

1. 3913
2. \$165
3. \$540
4. 35
5. \$260
6. 7 km
7. \$90

## UNIT 5

---

### Angles

1.  $45^\circ$
2.  $160^\circ$
3.  $162^\circ$

### Triangles

1.  $60 \text{ cm}^2$
2.  $38.5 \text{ cm}^2$
3.  $112 \text{ cm}^2$
4.  $95 \text{ cm}^2$

### General Problems

1. 24
2. Less than  $\frac{1}{2}$
3.  $3 \frac{1}{4}$  hours
4.  $\frac{3}{11}$
5. 30
6. c)  $\frac{4}{11}$  and  $\frac{7}{28}$
7. \$38.50

## UNIT 6

---

### Perimeter

1. 12 cm  
Each side = 4 cm  
Perimeter of A =  $(4+2) \times 2 = 12 \text{ cm}$
2. 24 cm  
Each side = 10 cm  
Perimeter of A =  $(10+2) \times 2 = 24 \text{ cm}$
3. 14 cm  
Side = 12 cm  
Perimeter =  $(4+3) \times 2 = 14 \text{ cm}$

### The Odd One Out

The following should be crossed out:

1. 3750 cents
2. 2.5 g
3. 160 seconds
4. 3205 mm
5. 420 minutes
6. 6.042 L
7. Quarter past Eleven

### General Problems

1. 77 ( $76-9-14+24$ )
2. 4 km ( $160 \div 40$ )
3. 46 760 464 ( $54 246 758 - 7 486 294$ )
4. \$2375 ( $28500 \div 12$ )
5.  $295^\circ$  ( $360 - 65$ )
6. 18
7.  $\frac{1}{4}$  ( $30 \div (30+40+50)$ )
8. 0.21

## UNIT 7

### Chance and Probability

1. 2/20 or 1/10, unlikely
2. 5/20 or 1/4, unlikely
3. 3/20, unlikely
4. 6/20 or 3/10, unlikely
5. 4/20 or 2/10, unlikely
6. 1/18, very unlikely
7. 1/4
8. 3/8
9. 1/4
10. 1/8

### General Problems

1. 38 kg ( $114 \div 3$ )
2. 80 seconds ( $200 \div 2.5$ )
3. 20 cm ( $12000 \div (30 \times 20)$ )
4. 150 ( $23-8 = 15, 15 \times 10=150$ )
5. 30 ( $5 \times 6=30$ )
6. 5 hours ( $400 \div 80$ )
7. 16 minutes ( $\frac{1}{5} \times 80$ )
8. 6 ( $4 \times 5=20, 38-20=18, 18 \div 3 = 6$ )

## UNIT 8

### Writing Equations

1.  $6 \times 14 = 84 \text{ cm}^2$
2.  $364 \div 14 = 26$
3.  $786 \div 4 = 196.5 \text{ cars} = 196 \text{ cars}$
4.  $18 - 7 = \$11$

### Rounding Numbers

1. a) 860  
b) 730  
c) 390
2. a) 500  
b) 300  
c) 700
3. a) 6000  
b) 5000

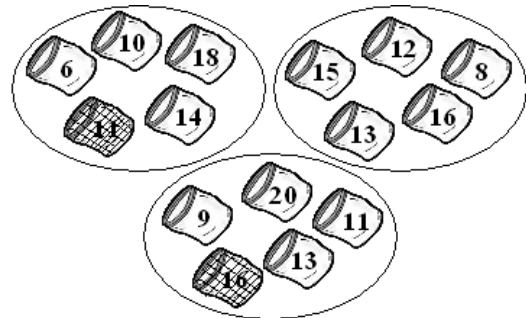
### General Problems

1. 60 mL ( $1000-(235 \times 4)$ )
2. 204 328 ( $7000000-495672$ )
3. 2kg for \$12  
( $5.50 \div 0.7 = \$7.857, 12 \div 2 = \$6$ )
4. 10 080 ( $60 \times 24 \times 7$ )
5. 69 km/h ( $345 \div 5$ )
6. \$16.40 ( $12 \div 3=4, \$4.10 \times 4 = \$16.40$ )
7. 22 817 630 ( $20743300 \times 1.1$ )
8. 999 900 ( $1000000-100$ )

## UNIT 9

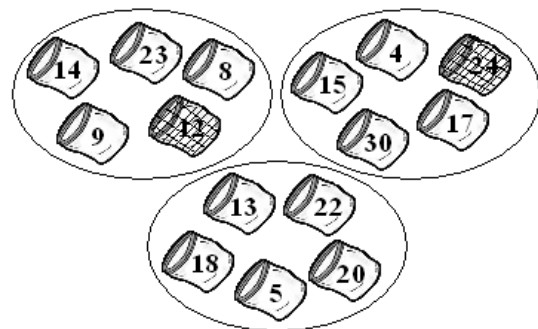
### Counting and Swapping

1.



Or 6 and 11

2.



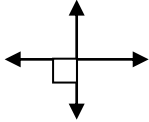
3.  $1440^\circ$
4.  $1880^\circ$

### Throwing Dice

1. Least - 2, 12  
Most - 7
2. 4 and 10
3. 36
4. 4/36 or 1/9

**General Problems**

1. 431,379,500( $9875 \times 43684$ )
2. 7
3. 38 m ( $9 \times 4 + 2$ )
4. \$28.30
5. 6 ( $1+2+3+4+5+6=21$ )
6. 7.2 m ( $16 \times 0.45$ )
7. 48 cm ( $6 \times 8$ )
8.  $90^\circ$  (right angle)



9. False

---

**UNIT 10**

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**Co-ordinates and Codes**

Practice Makes Perfect

**Predictions**

1. a) 140  
b) 180  
c) 280  
d) 200
2. 1600

**General Problems**

1. 2.72 kg ( $1.02 \div \frac{3}{8}$ )
2. 47( $1 \times 9 + 2 \times 19$ )
3. 1,000 ( $10 \times 10 \times 10$ )
4. \$584( $180 \times 2 + 4 \times 56$ )
5. \$258( $30 + 12 \times 19$ )
6. 100 grams
7. \$150( $198 \times \frac{10}{12} = 165$ ,  $165 \times \frac{10}{11} = 150$ )
8. \$45( $27 \div 0.6$ )

# **Mental Maths**

## **Answer**

**Term 1**

**YEAR 5**

**UNIT 1****DAY 1**

- (1) 171
- (2) 1053
- (3) 859
- (4) 13030
- (5) 11684
- (6) 122512
- (7) 99937
- (8) 503802
- (9) 576282
- (10) 995534
- (11) 296294
- (12) 875942
- (13) 121326
- (14) 911271
- (15) 857372
- (16) 869579

**DAY 2**

- (1) 55
- (2) 65
- (3) 45
- (4) 4619
- (5) 4748
- (6) 20596
- (7) 42638
- (8) 233914
- (9) 627763
- (10) 145703
- (11) 595055
- (12) 140877
- (13) 611089
- (14) 452846
- (15) 366664
- (16) 678281

**DAY 3**

- (1) 215
- (2) 603
- (3) 258
- (4) 7686
- (5) 2845
- (6) 38154
- (7) 25686
- (8) 86913
- (9) 5000
- (10) 5706
- (11) 38311
- (12) 11505
- (13) 489848
- (14) 100096
- (15) 262716
- (16) 373734

**DAY 4**

- (1) 1725
- (2) 1020
- (3) 1938
- (4) 4698
- (5) 1056
- (6) 24096
- (7) 25047
- (8) 52785
- (9) 72600
- (10) 54612

**DAY 5**

- (1) 9
- (2) 19
- (3) 13
- (4) 98
- (5) 562
- (6) 741
- (7) 852
- (8) 502
- (9) 9 r 5
- (10) 5 r 3
- (11) 15 r 1
- (12) 86 r 4
- (13) 854 r 2
- (14) 506 r 5
- (15) 744 r 1
- (16) 823 r 3

**DAY 6**

- (1) 56
- (2) 27 r 3
- (3) 4 r 8
- (4) 12
- (5) 11 r 10
- (6) 24
- (7) 14 r 5
- (8) 11 r 1
- (9) 201
- (10) 105r3

**UNIT 2****DAY 1**

1)  $1\frac{5}{8}$

2)  $6\frac{3}{4}$

3)  $4\frac{2}{3}$

4)  $2\frac{4}{7}$

5)  $31\frac{1}{2}$

6)  $12\frac{1}{2}$

7)  $15\frac{1}{2}$

8)  $11\frac{3}{5}$

9)  $6\frac{1}{3}$

10)  $153\frac{3}{5}$

11)  $107\frac{1}{3}$

12)  $118\frac{2}{3}$

13) 112

14)  $654\frac{2}{3}$

15)  $1\frac{1}{3}$

16)  $16\frac{4}{21}$

**DAY 2**

1)  $\frac{7}{3}$

2)  $\frac{66}{15}$

3)  $\frac{45}{8}$

4)  $\frac{73}{6}$

5)  $\frac{138}{11}$

6)  $\frac{38}{7}$

7)  $\frac{27}{4}$

8)  $\frac{33}{17}$

9)  $\frac{11}{3}$

10)  $\frac{61}{4}$

11)  $\frac{127}{10}$

12)  $\frac{53}{14}$

13)  $\frac{77}{20}$

14)  $\frac{226}{17}$

15)  $\frac{373}{16}$

16)  $\frac{227}{19}$

**DAY 3**

1)  $3,4,\frac{2}{3}$

2)  $\frac{3}{4}$

3)  $\frac{1}{2}$

4)  $\frac{7}{8}$

5)  $\frac{13}{15}$

6)  $\frac{7}{8}$

7)  $\frac{13}{21}$

8)  $\frac{7}{33}$

9)  $\frac{5}{8}$

10)  $\frac{7}{8}$

11)  $\frac{11}{18}$

12)  $\frac{1}{2}$

13)  $\frac{5}{8}$

14)  $\frac{7}{8}$

15)  $\frac{89}{121}$

16)  $\frac{31}{48}$

**DAY 4**

- (1) 5, 2, 5, 2,  $\frac{7}{10}$
- (2)  $\frac{23}{30}$
- (3)  $\frac{11}{30}$
- (4)  $\frac{29}{45}$
- (5)  $\frac{23}{24}$
- (6)  $\frac{5}{6}$
- (7)  $\frac{1}{2}$
- (8)  $\frac{7}{9}$
- (9)  $\frac{29}{30}$
- (10)  $\frac{17}{21}$
- (11)  $\frac{50}{63}$
- (12)  $\frac{21}{110}$
- (13)  $\frac{53}{60}$
- (14)  $\frac{13}{24}$
- (15)  $\frac{15}{14}$
- (16)  $\frac{41}{30}$

**DAY 5**

- (1) -
- (2)  $4\frac{33}{40}$
- (3)  $2\frac{83}{90}$
- (4)  $7\frac{11}{15}$
- (5)  $29\frac{87}{88}$
- (6)  $5\frac{39}{40}$
- (7)  $11\frac{5}{6}$
- (8)  $8\frac{16}{21}$
- (9)  $8\frac{31}{35}$
- (10)  $8\frac{2}{45}$
- (11)  $5\frac{9}{10}$
- (12)  $6\frac{7}{8}$
- (6)  $7\frac{1}{6}$
- (7)  $8\frac{7}{15}$
- (8)  $8\frac{1}{9}$
- (9)  $12\frac{2}{21}$
- (10)  $7\frac{9}{40}$
- (11)  $17\frac{2}{21}$
- (12)  $23\frac{17}{36}$
- (13)  $10\frac{19}{56}$
- (14)  $55\frac{7}{24}$
- (15)  $10\frac{19}{72}$
- (16)  $10\frac{5}{12}$

**DAY 6**

- (1)  $4\frac{1}{6}$
- (2)  $8\frac{1}{4}$
- (3)  $8\frac{4}{15}$
- (4)  $7\frac{4}{35}$
- (5)  $9\frac{11}{24}$

**UNIT 3****DAY 1**

1)  $\frac{1}{2}$       2)  $\frac{3}{10}$

3)  $\frac{9}{16}$       4)  $\frac{13}{21}$

5)  $\frac{1}{8}$       6)  $\frac{3}{8}$

7)  $\frac{27}{35}$       8)  $\frac{1}{5}$

9)  $\frac{3}{4}$       10)  $\frac{5}{12}$

11)  $\frac{41}{63}$       12)  $\frac{11}{60}$

13)  $\frac{7}{44}$       14)  $\frac{5}{12}$

15)  $\frac{1}{9}$       16)  $\frac{3}{5}$

**DAY 2**

1)  $\frac{11}{21}$       2)  $\frac{1}{18}$

3)  $\frac{11}{40}$       4)  $\frac{10}{99}$

5)  $\frac{27}{40}$       6)  $\frac{23}{42}$

7)  $\frac{14}{39}$       8)  $\frac{11}{24}$

9)  $\frac{2}{63}$       10)  $\frac{19}{56}$

11)  $\frac{28}{75}$       12)  $\frac{29}{80}$

13)  $\frac{1}{2}$       14)  $\frac{45}{77}$

15)  $\frac{29}{72}$       16)  $\frac{3}{10}$

**DAY 3**

(1)  $5\frac{4}{21}$

(2)  $7\frac{1}{24}$

(3)  $13\frac{5}{14}$

(4)  $6\frac{1}{8}$

(5)  $1\frac{4}{21}$

(6)  $\frac{6}{35}$

(7)  $3\frac{8}{63}$

(8)  $1\frac{19}{72}$

(9)  $4\frac{7}{24}$

(10)  $3\frac{5}{22}$



**DAY 4**

- 1)  $1\frac{5}{6}$
- 2)  $4\frac{25}{36}$
- 3)  $6\frac{5}{6}$
- 4)  $5\frac{13}{21}$
- 5)  $13\frac{13}{24}$
- 6)  $\frac{14}{15}$
- 7)  $3\frac{23}{24}$
- 8)  $\frac{7}{8}$
- 9)  $\frac{48}{55}$
- 10)  $1\frac{20}{21}$
- 11)  $\frac{9}{14}$
- 12)  $5\frac{8}{9}$

**DAY 5**

- 1)  $4\frac{37}{60}$
- 2)  $6\frac{8}{21}$
- 3)  $7\frac{13}{14}$
- 4)  $11\frac{7}{9}$
- 5)  $2\frac{7}{9}$
- 6)  $7\frac{1}{18}$
- 7)  $1\frac{5}{8}$
- 8)  $17\frac{3}{4}$
- 9)  $8\frac{37}{42}$
- 10)  $5\frac{23}{99}$
- 11)  $6\frac{43}{45}$
- 12)  $10\frac{14}{15}$

**DAY 6**

- 1)  $6\frac{27}{28}$
- 2)  $3\frac{9}{16}$
- 3)  $7\frac{13}{24}$
- 4)  $\frac{13}{36}$
- 5)  $12\frac{7}{24}$
- 6)  $2\frac{5}{8}$
- 7)  $32\frac{1}{9}$
- 8)  $8\frac{41}{45}$
- 9)  $8\frac{2}{3}$
- 10)  $28\frac{13}{20}$
- 11)  $32\frac{13}{15}$
- 12)  $1\frac{5}{8}$

**UNIT 4****DAY 1**

1)  $\frac{1}{6}$

2)  $\frac{1}{3}$

3)  $\frac{2}{5}$

4)  $\frac{5}{16}$

5)  $\frac{40}{63}$

6)  $\frac{3}{8}$

7)  $\frac{3}{25}$

8)  $\frac{11}{30}$

9)  $\frac{3}{13}$

10)  $\frac{21}{40}$

11)  $\frac{2}{7}$

12)  $\frac{1}{5}$

13)  $\frac{6}{7}$

14)  $\frac{4}{5}$

15)  $\frac{1}{15}$

16)  $\frac{5}{14}$

**DAY 2**

1)  $\frac{5}{56}$

2)  $\frac{6}{7}$

3)  $\frac{1}{7}$

4)  $1\frac{1}{2}$

5)  $8\frac{1}{2}$

6)  $\frac{10}{21}$

7)  $4\frac{2}{7}$

8)  $\frac{20}{49}$

9)  $\frac{2}{3}$

10)  $1\frac{3}{7}$

11)  $30\frac{1}{3}$

12)  $8\frac{1}{3}$

13)  $\frac{22}{25}$

14)  $1\frac{11}{14}$

15)  $1\frac{2}{7}$

16)  $1\frac{15}{19}$

**DAY 3**

1)  $1\frac{2}{7}$

2)  $1\frac{4}{15}$

3)  $2\frac{2}{3}$

4)  $1\frac{1}{9}$

5)  $\frac{3}{4}$

6)  $5\frac{4}{11}$

7)  $\frac{4}{11}$

8)  $\frac{33}{65}$

9)  $1\frac{2}{3}$

10)  $\frac{3}{8}$

11)  $\frac{7}{8}$

12)  $5\frac{3}{7}$

**DAY 4**

- 1)  $10\frac{1}{2}$
- 2)  $4\frac{6}{7}$
- 3) 3
- 4)  $6\frac{3}{5}$
- 5)  $9\frac{1}{6}$
- 6)  $3\frac{1}{7}$
- 7)  $\frac{4}{5}$
- 8)  $3\frac{4}{5}$
- 9)  $5\frac{4}{5}$
- 10)  $3\frac{1}{5}$
- 11)  $12\frac{2}{5}$
- 12)  $1\frac{13}{15}$

**DAY 5**

- 1)  $3\frac{9}{16}$
- 2)  $1\frac{7}{9}$
- 3) 5
- 4)  $1\frac{5}{7}$
- 5)  $10\frac{5}{6}$
- 6)  $5\frac{1}{3}$
- 7)  $10\frac{1}{2}$
- 8)  $5\frac{2}{3}$
- 9)  $5\frac{5}{6}$
- 10)  $4\frac{4}{5}$
- 11) 6
- 12)  $7\frac{1}{4}$

**DAY 6**

- 1)  $8\frac{1}{4}$
- 2)  $4\frac{1}{3}$
- 3)  $7\frac{4}{5}$
- 4)  $8\frac{1}{2}$
- 5)  $7\frac{3}{20}$
- 6)  $23\frac{1}{3}$
- 7)  $7\frac{1}{2}$
- 8) 8
- 9)  $4\frac{2}{5}$
- 10)  $12\frac{1}{4}$
- 11)  $17\frac{2}{7}$
- 12)  $2\frac{1}{2}$

**UNIT 5****DAY 1**

- 1) 9
- 2)  $11\frac{2}{3}$
- 3) 4
- 4)  $7\frac{1}{2}$
- 5)  $\frac{1}{27}$
- 6)  $\frac{1}{8}$
- 7)  $\frac{2}{5}$
- 8)  $\frac{3}{20}$
- 9) 2
- 10) 2
- 11)  $1\frac{2}{7}$
- 12)  $4\frac{4}{5}$
- 13)  $\frac{7}{10}$
- 14)  $1\frac{1}{3}$
- 15)  $\frac{1}{3}$
- 16)  $\frac{9}{10}$

**DAY 2**

- 1)  $\frac{24}{25}$
- 2)  $\frac{7}{8}$
- 3)  $1\frac{1}{2}$
- 4)  $\frac{8}{9}$
- 5)  $1\frac{2}{3}$
- 6)  $\frac{27}{56}$
- 7)  $\frac{5}{6}$
- 8)  $1\frac{1}{4}$
- 9)  $4\frac{2}{7}$
- 10)  $\frac{3}{5}$
- 11)  $7\frac{5}{7}$
- 12)  $1\frac{3}{7}$
- 13)  $1\frac{5}{9}$
- 14)  $1\frac{1}{7}$
- 15)  $2\frac{1}{7}$
- 16)  $4\frac{1}{8}$

**DAY 3**

- 1)  $5\frac{1}{4}$
- 2)  $3\frac{3}{5}$
- 3)  $9\frac{3}{4}$
- 4) 2
- 5) 3
- 6) 8
- 7)  $5\frac{1}{4}$
- 8)  $1\frac{1}{5}$
- 9)  $2\frac{1}{3}$
- 10)  $3\frac{1}{5}$
- 11)  $1\frac{4}{5}$
- 12)  $7\frac{5}{9}$

**DAY 4**

- 1)  $\frac{2}{5}$
- 2)  $\frac{22}{25}$
- 3)  $\frac{20}{31}$
- 4)  $\frac{1}{2}$
- 5)  $\frac{2}{3}$
- 6)  $\frac{13}{20}$
- 7)  $\frac{10}{11}$
- 8)  $\frac{45}{56}$
- 9)  $\frac{18}{25}$
- 10)  $\frac{18}{35}$
- 11)  $\frac{9}{13}$
- 12)  $\frac{6}{11}$

**DAY 5**

- 1)  $3\frac{7}{36}$
- 2)  $1\frac{1}{2}$
- 3)  $\frac{3}{4}$
- 4) 2
- 5)  $\frac{4}{11}$
- 6)  $\frac{51}{55}$
- 7)  $1\frac{1}{7}$
- 8)  $1\frac{1}{9}$
- 9)  $1\frac{11}{27}$
- 10)  $1\frac{4}{9}$
- 11)  $2\frac{8}{13}$
- 12)  $1\frac{11}{16}$

**DAY 6**

- 1)  $2\frac{1}{4}$
- 2)  $1\frac{2}{3}$
- 3)  $3\frac{1}{9}$
- 4)  $6\frac{1}{2}$
- 5)  $2\frac{5}{13}$
- 6)  $3\frac{4}{7}$
- 7)  $3\frac{1}{2}$
- 8)  $2\frac{1}{6}$
- 9)  $1\frac{3}{7}$
- 10)  $2\frac{1}{3}$
- 11)  $1\frac{7}{18}$
- 12)  $3\frac{1}{3}$

**UNIT 6****DAY 1**

1. 3
2. 30
3. 300
4. 3000
5. 11
6. 110
7. 1100
8. 11000
9. 3.9
10. 39
11. 390
12. 3900
13. 20.7
14. 207
15. 2070
16. 20700

**DAY 2**

1. 0.53
2. 5.3
3. 53
4. 530
5. 31.24
6. 312.4
7. 3124
8. 31240
9. 0.368
10. 3.68
11. 36.8
12. 368
13. 51.172
14. 511.72
15. 5117.2
16. 51172

**DAY 3**

1. 7
2. 3.6
3. 2.27
4. 0.806
5. 520
6. 396
7. 301.2
8. 203.69
9. 200
10. 940
11. 5882
12. 6203.1
13. 28 000
14. 38 500
15. 67 750
16. 45 657

**DAY 4**

1. 2.4
2. 4
3. 7.2
4. 5.6
5. 8
6. 10.4
7. 24
8. 20
9. 3.2
10. 8
11. 32
12. 64
13. 160
14. 176
15. 368
16. 640

**DAY 5**

1. 2.36
2. 4.72
3. 11.8
4. 35.4
5. 118
6. 236
7. 354
8. 590
9. 7.162
10. 17.905
11. 71.62
12. 179.05
13. 358.1
14. 1074.3
15. 1790.5
16. 2148.6

**DAY 6**

1. 94.25
2. 89.16
3. 15.2
4. 76
5. 152
6. 304
7. 456
8. 608
9. 95.25
10. 71.36
11. 147
12. 725
13. 1470
14. 4410
15. 2940
16. 5880

## UNIT 7

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### DAY 1

1. 420
2. 42
3. 4.2
4. 0.42
5. 240
6. 24
7. 2.4
8. 0.24
9. 13500
10. 1350
11. 135
12. 13.5
13. 7700
14. 770
15. 77
16. 7.7

### DAY 2

1. 3.6
2. 6
3. 8.4
4. 10.8
5. 36
6. 60
7. 84
8. 108
9. 17.4
10. 52.2
11. 69.6
12. 104.4
13. 174
14. 522
15. 696
16. 1044

### DAY 3

1. 0.385
2. 0.77
3. 1.155
4. 1.54
5. 0.875
6. 1.05
7. 1.925
8. 2.1
9. 0.704
10. 1.408
11. 2.112
12. 2.816
13. 0.825
14. 1.375
15. 2.475
16. 3.85

### DAY 4

1. 0.09
2. 0.009
3. 0.0009
4. 0.009
5. 0.0009
6. 0.00009
7. 0.0009
8. 0.00009
9. 1.35
10. 0.135
11. 0.0135
12. 0.135
13. 0.0135
14. 0.00135
15. 0.0135
16. 0.00135

### DAY 5

1. 0.0064
2. 0.00064
3. 0.000064
4. 4.32
5. 0.432
6. 0.0432
7. 0.00432
8. 0.000432
9. 0.015
10. 0.025
11. 0.105
12. 0.012
13. 0.01706
14. 0.20472
15. 0.32878
16. 0.17406

### DAY 6

1. 11.25
2. 0.972
3. 7.397
4. 21.681
5. 6.966
6. 22.36
7. 33.3
8. 6.664
9. 5.244
10. 13.112
11. 17.628
12. 20.332

**UNIT 8****DAY 1**

1. 60
2. 6
3. 0.6
4. 0.06
5. 79
6. 7.9
7. 0.79
8. 0.079
9. 36.78
10. 3.678
11. 0.3678
12. 3.678
13. 0.3678
14. 0.03678
15. 0.3678
16. 0.03678

**DAY 2**

1. 8
2. 0.8
3. 0.08
4. 0.008
5. 1.6
6. 0.16
7. 0.016
8. 0.0016
9. 0.97
10. 0.097
11. 0.097
12. 0.0097
13. 1.548
14. 0.1548
15. 0.203
16. 0.0203

**DAY 3**

1. 9.9
2. 0.8
3. 0.99
4. 0.08
5. 60.02
6. 6.002
7. 0.6002
8. 0.06002
9. 0.439
10. 0.057
11. 0.0439
12. 0.0057
13. 7.865
14. 0.7865
15. 0.07865
16. 0.007865

**DAY 4**

1. 5.6
2. 0.56
3. 7.8
4. 0.78
5. 0.54
6. 0.054
7. 0.28
8. 0.028
9. 4
10. 0.4
11. 6
12. 0.6
13. 7
14. 0.7
15. 9
16. 0.9

**DAY 5**

1. 24
2. 2.4
3. 240
4. 24
5. 12
6. 1.2
7. 120
8. 12
9. 3
10. 0.3
11. 30
12. 3
13. 4
14. 0.4
15. 40
16. 4

**DAY 6**

1. 7
2. 0.7
3. 0.07
4. 0.007
5. 70
6. 700
7. 7
8. 7
9. 9
10. 0.9
11. 0.09
12. 0.009
13. 90
14. 900
15. 9
16. 9



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**UNIT 9**

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**DAY 1**

1. 2.2
2. 2.4
3. 1.9
4. 3.7
5. 4.9
6. 15.8
7. 5.6
8. 69.6
9. 89.7
10. 1.9
11. 43.2
12. 53.8

**DAY 2**

1. 1.57
2. 2.42
3. 1.95
4. 3.64
5. 8.46
6. 8.69
7. 8.67
8. 8.99
9. 6.85
10. 5.68
11. 0.96
12. 5.32

**DAY 3**

1. 0.3
2. 0.5
3. 0.8
4. 0.04
5. 0.017
6. 0.07
7. 0.7
8. 0.7
9. 0.08
10. 0.53
11. 0.54
12. 0.64

**DAY 4**

1. 6.32
2. 12.5
3. 5.65
4. 3.625
5. 5.4
6. 8.55
7. 1.25
8. 1.8
9. 1.75
10. 2.6
11. 2.25
12. 33.5

**DAY 5**

1. 9.075
2. 5.9
3. 6.3
4. 8.4
5. 12.5
6. 12.05
7. 1.125
8. 2.375
9. 4.75
10. 2.25
11. 1.25
12. 0.375

**DAY 6**

1. 26.6
2. 25.6
3. 8.18
4. 7.075
5. 68.5
6. 7.3
7. 79.1
8. 36.55
9. 10.48
10. 7.7
11. 133
12. 0.625

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**UNIT 10**

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**DAY 1**

1. 7
2. 9
3. 8
4. 3
5. 131
6. 67
7. 12
8. 14
9. 3.44
10. 10.4
11. 75.7
12. 3.71

**DAY 2**

1. 2
2. 6
3. 42
4. 62.5
5. 182
6. 190
7. 400
8. 300
9. 72.5
10. 202
11. 432
12. 402

**DAY 3**

1. 6
2. 16
3. 0.27
4. 184
5. 294
6. 0.89
7. 7
8. 1.6
9. 0.17
10. 65
11. 157.5
12. 650

**DAY 4**

1. 3
2. 1.71
3. 9.5
4. 6.4
5. 3.625
6. 5.7
7. 13.2
8. 19.4

**DAY 5**

1. 10.94
2. 10.448
3. 30.97
4. 66.87
5. 51.475
6. 46.96
7. 1.33
8. 5.4

**DAY 6**

1. 9.26
2. 247.79
3. 4.25
4. 0.073
5. 182.7
6. 76.025
7. 4.37
8. 0.13