

SIMULATION EXAM 6 (75 QUESTIONS)

SESSION A: READING — NARRATIVE TEXT

Read the following narrative passage carefully. Then answer Questions 1 through 12.

"The Storm"

Aria had been babysitting her brother Leo for forty-three minutes when the power went out.

She knew it was forty-three minutes because she had been counting them. Their parents had gone to a friend's house for dinner — only fifteen minutes' drive away — and they had said they would be back by eight. It was now seven-fourteen.

Leo was four years old and afraid of the dark.

The kitchen, where Aria had been finishing the dishes, went black so suddenly that she heard her own gasp. From the living room came Leo's quiet, frightened voice.

"Aria?"

"It's okay," she called back, drying her hands on a tea towel. "The power just went out. I'm coming."

She felt her way along the wall to the drawer where her mother kept the candles and flashlight. The flashlight, when she clicked it on, threw a wobbly yellow beam across the kitchen. Outside, the rain had begun to pour. Thunder rumbled somewhere far off.

Leo was sitting on the rug in the middle of the living room. His blocks were scattered around him. In the flashlight beam, his eyes looked very big.

"Are the lights broken?" he asked.

"Just for a little while. The storm did it."

"Forever?"

"No. They'll come back. Probably soon."

Leo did not look convinced. Aria sat down on the rug beside him.

"Let's make a fort," she said.

It was the most useful idea she had ever had. For the next thirty minutes, they pulled the cushions off the couch, dragged blankets from the linen closet, and built an enormous, lumpy fort across the living room floor. Aria propped up the flashlight inside the fort so it glowed warm and yellow, like a campfire.

Inside the fort, Leo forgot about the dark. They told silly stories. They made up names for stuffed animals. When the thunder got louder, they pretended it was a dragon stomping outside their fort, and they laughed so hard that Leo got the hiccups.

The power came back at seven fifty-three. The living room lights snapped on with a sudden brightness that made them both blink. Leo crawled out from under the fort and looked around as if seeing the room for the first time.

"Can we keep the fort up?" he asked.

"Until Mom and Dad get home."

When their parents walked in a few minutes later, they found Aria and Leo back inside the fort, eating crackers and giggling. Their father turned off the kitchen light so the only glow came from the flashlight inside the fort.

"Tell us about the storm," he said.

So Leo did, with great drama and waving arms. Aria leaned back against a cushion and listened. The story he told was much more exciting than the actual storm had been. But she did not correct him. She thought that maybe the way Leo would remember it was the best way of all.

1. For how long had Aria been babysitting Leo when the power went out?

- A. About one full hour from when their parents left
- B. Forty-three minutes
- C. Only fifteen minutes since the dinner began
- D. Almost two hours of looking after him

2. What was Aria doing when the power went out?

- A. Reading a book quietly in the living room
- B. Putting Leo to bed for the night
- C. Finishing the dishes in the kitchen
- D. Watching a movie on the family television

3. How old is Leo?

- A. Four years old
- B. Five years old
- C. Six years old
- D. Seven years old

4. Where does Aria find the flashlight?

- A. In a cupboard above the kitchen refrigerator
- B. On a high shelf in the family laundry room
- C. Under the cushions of the living room couch
- D. In a drawer where her mother kept the candles and flashlight

5. What does Leo ASK about the lights when Aria first sits down with him?

- A. He asks if the power will come back tomorrow morning
- B. He asks Aria to call their parents on the phone right away
- C. He asks if the lights are broken
- D. He asks Aria to take him outside to see the storm

6. What does Aria suggest doing to take Leo's mind off the dark?

- A. Make a fort out of cushions and blankets
- B. Sing songs together by the light of the flashlight
- C. Read aloud from one of Leo's favourite picture books
- D. Call their parents and ask them to come home immediately

7. Inside the fort, how does Aria make it feel like a "campfire"?

- A. She lights one of her mother's candles in the middle
- B. She props up the flashlight inside so it glows warm and yellow
- C. She tells Leo scary stories to make him feel brave
- D. She turns the heat in the house up to its highest setting

8. What do Aria and Leo pretend the thunder is?

- A. A loud delivery truck driving past their house
- B. A train going by the train tracks nearby
- C. The doorbell ringing repeatedly outside
- D. A dragon stomping outside their fort

9. What does the word "lumpy" mean as it is used in the passage?

- A. Damp and slightly sticky to the touch
- B. Sharp and cutting along the edges
- C. Uneven and bumpy in shape
- D. Completely smooth and flat all over

10. Why does Aria NOT correct Leo's exciting version of the story?

- A. She does not remember the events well enough to correct him
- B. She thinks his version is the best way for him to remember it
- C. She is too tired from babysitting to interrupt his story
- D. She wants her parents to think Leo is a talented storyteller

11. Which sentence BEST states a theme of this passage?

- A. Care and creativity can turn a scary situation into a happy memory
- B. Children should never be left alone during severe thunderstorms
- C. Older siblings should not have to babysit their younger brothers
- D. Stories told about events are always more exciting than the events themselves

SESSION B: READING — INFORMATIONAL TEXT

Read the following informational passage carefully. Then answer Questions 13 through 18.

"Why Volcanoes Erupt"

Deep beneath the surface of the Earth, far below where any plant grows or any person has ever travelled, the rock is so hot that it melts. This melted rock is called magma, and it is the secret behind every volcano on our planet.

The Earth is made of layers. The thin layer we live on, called the crust, sits on top of a thick layer called the mantle. The mantle is so hot — over a thousand degrees Celsius — that the rock there flows slowly, like very thick honey. In some places, magma rises up from the mantle and collects in pools called magma chambers, deep inside the crust.

When pressure builds up in a magma chamber, the magma may force its way upward through cracks in the crust. If it reaches the surface, an eruption begins. The melted rock that flows out is no longer called magma — once it is on the surface, it is called lava. Lava can pour gently down the sides of a mountain, or it can be thrown into the air with great force, depending on how thick it is and how much gas is trapped inside it.

Volcanoes form mostly along the edges of giant pieces of the Earth's crust called tectonic plates. Where two plates pull apart, magma rises easily, creating volcanoes along the seam. Where one plate slides under another, the lower plate melts and feeds magma chambers above. This is why most of the world's volcanoes are found in long chains — like the famous Ring of Fire that circles the Pacific Ocean.

Volcanic eruptions can be dangerous, but they are also creators. The lava that cools into rock builds new land. Volcanic soil is some of the richest farmland on Earth. The Hawaiian Islands themselves were formed entirely by volcanic eruptions over millions of years. Even the air we breathe was partly produced by ancient volcanoes pushing gases up from inside the Earth.

A volcano, in many ways, is a window into the inside of our planet.

13. Which sentence BEST states the main idea of the passage?

- A. The Hawaiian Islands were entirely formed by volcanic eruptions over time
- B. The Ring of Fire is the most active volcanic chain in the world today
- C. Magma chambers are very dangerous and should be avoided by everyone
- D. Volcanoes form when hot melted rock from deep inside the Earth reaches the surface

14. What is the name for melted rock BEFORE it reaches the Earth's surface?

- A. Lava
- B. Magma
- C. Mantle
- D. Tectonic

15. According to the passage, how hot is the Earth's mantle?

- A. About one hundred degrees Celsius all year round
- B. About five hundred degrees Celsius on average
- C. Over a thousand degrees Celsius
- D. Over ten thousand degrees Celsius at its deepest part

16. What does the word "seam" mean as it is used in the passage?

- A. The place where two pieces meet or join
- B. A type of mountain peak found near oceans
- C. A small underwater volcano with little activity
- D. A pattern of small repeating earthquakes

- C. My favourite fruits, are apples bananas and oranges
- D. My favourite, fruits are apples bananas and oranges

20. Which option BEST combines the two sentences using a SUBORDINATING conjunction?

I forgot my umbrella. I had to walk home in the rain.

- A. I forgot my umbrella, and I had to walk home in the rain
- B. I forgot my umbrella, but I had to walk home in the rain
- C. Because I forgot my umbrella, I had to walk home in the rain
- D. I forgot my umbrella; I had to walk home in the rain

21. Which sentence has a CORRECT compound subject?

- A. Mateo and his sister walk to school together each morning
- B. Mateo, and his sister walks to school together each morning
- C. Mateo and his sister walks to school together each morning
- D. Mateo and his sister, walk, to school together each morning

22. Which sentence uses a COLON correctly?

- A. The recipe needs: flour, eggs, and milk for the batter
- B. I made a list: of things to bring on the camping trip
- C. We have: three good options to consider this weekend
- D. The cabin had everything we needed: beds, a kitchen, and a fireplace

23. In the sentence below, which word is a CONJUNCTION?

Jamie wanted to go swimming, but the pool was closed for cleaning.

- A. swimming
- B. but
- C. pool
- D. closed

24. Which sentence uses the apostrophe CORRECTLY for a singular possessive?

- A. The dog's collar was bright red with a small silver tag
- B. The dogs' collar was bright red with a small silver tag
- C. The dogs collar was bright red with a small silver tag
- D. The dog,s collar was bright red with a small silver tag

25. Which sentence uses a COMPOUND PREDICATE correctly?

- A. The students and the teacher worked on the project together
- B. The students worked hard, the teacher helped them succeed
- C. The students completed the assignment and presented it to the class
- D. The students who worked on the project gave a long presentation

26. Which sentence is written in the PROGRESSIVE tense?

- A. The artist painted a beautiful mural on the school wall
- B. The artist is painting a beautiful mural on the school wall
- C. The artist will paint a beautiful mural on the school wall
- D. The artist had painted a beautiful mural on the school wall

27. Which sentence uses the correct PLURAL form of an irregular noun?

- A. The childs played in the sandbox during recess yesterday
- B. The childrens played in the sandbox during recess yesterday
- C. The childs' played in the sandbox during recess yesterday
- D. The children played in the sandbox during recess yesterday

28. Which sentence BEST uses descriptive language?

- A. The crisp autumn leaves crunched beneath our hurried footsteps
- B. The leaves were on the ground in autumn that year
- C. We walked across the leaves and they made some sounds
- D. The autumn leaves were there when we walked outside

29. Which sentence uses the SUPERLATIVE form of an adjective correctly?

- A. Of the three runners, Maya was the most fastest in her group
- B. Of the three runners, Maya was the more fastest in her group
- C. Of the three runners, Maya was the fastest in her group
- D. Of the three runners, Maya was the more fast in her group

30. Which sentence shows CORRECT pronoun agreement with its antecedent?

- A. Each student finished their lunch quickly before the bell rang
- B. Every dog wagged their tail when their owner arrived home
- C. Neither of the cats wanted their food bowl filled today
- D. The boys finished their lunches before going to recess

D. 500,000

33. What is 45×12 ?

A. 57

B. 470

C. 480

D. 540

34. Which decimal is EQUIVALENT to the fraction $7/10$?

A. 0.7

B. 0.07

C. 0.10

D. 7.10

35. A store has 60 books in stock. If 15 of them are sold, what PERCENT of the books were sold?

A. 60%

B. 15%

C. 25%

D. 45%

36. A class has 28 students. The ratio of girls to boys is 4 : 3. How many GIRLS are in the class?

A. 12

B. 16

C. 7

D. 21

37. Marco is reading a 240-page book. He has already read 96 pages. How many MORE pages does he need to read to finish?

A. 240 pages

B. 96 pages

C. 336 pages

D. 144 pages

38. What is $6.4 + 2.78$?

A. 9.18

B. 8.18

C. 9.08

D. 8.4

39. What is $\frac{3}{4} \times 8$?

A. 11

B. 32

C. 6

D. 12

40. What is the value of the expression $4x + 3$ when $x = 5$?

A. 12

B. 23

C. 27

D. 35

41. Solve for x : $x \div 3 = 9$

A. 3

B. 6

C. 12

D. 27

42. What is the 8th term in the pattern: 5, 10, 15, 20, 25, ...?

A. 40

B. 30

C. 35

D. 45

43. Simplify the expression: $3(2x + 4)$

A. $5x + 4$

B. $6x + 4$

C. $6x + 12$

D. $5x + 12$

44. Look at the pseudocode below.

SET sum = 0

FOR each number from 1 to 5: Add the number to sum

Display sum

What value will be displayed?

- A. 5
- B. 25
- C. 10
- D. 15

45. What is the mean of these test scores: 70, 85, 75, 90, 80?

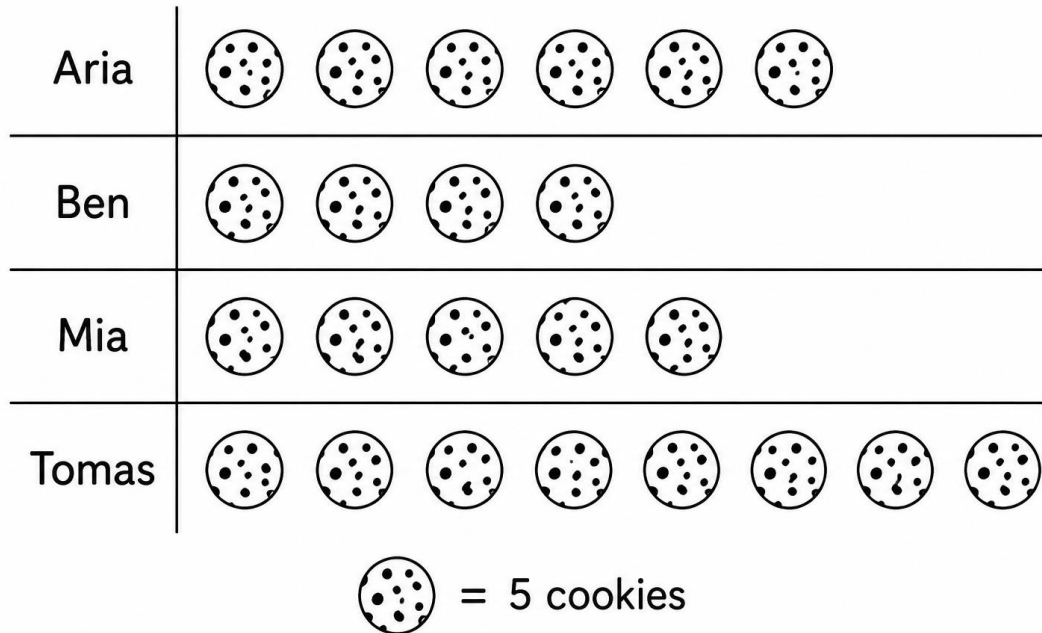
- A. 75
- B. 80
- C. 85
- D. 90

46. A fair coin is flipped once. What is the probability of getting HEADS?

- A. $\frac{1}{2}$
- B. $\frac{1}{4}$
- C. $\frac{1}{3}$
- D. 1

47. The pictograph below shows the number of cookies sold by four students at a bake sale. According to the pictograph, how many cookies did Aria sell?

Cookies Sold at the Bake Sale



- A. 6 cookies
- B. 25 cookies
- C. 30 cookies
- D. 35 cookies

48. What is the range of these numbers: 23, 18, 35, 12, 28, 19?

- A. 12
- B. 23
- C. 18
- D. 35

49. A bag contains 6 red marbles, 4 blue marbles, and 2 green marbles. What is the probability of drawing a BLUE marble?

- A. 4/6

- B. $\frac{6}{12}$
- C. $\frac{2}{12}$
- D. $\frac{1}{3}$

50. Which of the following numbers is a FACTOR of 36?

- A. 9
- B. 5
- C. 7
- D. 11

SESSION D: MATHEMATICS — STAGE 2

Answer Questions 51 through 75 by selecting the best answer.

51. A bakery makes 144 cupcakes each day. They sell the cupcakes in boxes of 12. How many BOXES of cupcakes can they fill each day?

- A. 10 boxes
- B. 14 boxes
- C. 12 boxes
- D. 16 boxes

52. What is $\frac{5}{6} + \frac{1}{3}$?

- A. $\frac{6}{9}$
- B. $\frac{6}{18}$
- C. $\frac{1}{2}$

D. $\frac{7}{6}$

53. What is 75% of 80?

A. 50

B. 60

C. 65

D. 70

54. The table below shows a relationship between input (n) and output (y). Which equation BEST represents this relationship?

| n | y |

|---|---|

| 1 | 4 |

| 2 | 7 |

| 3 | 10 |

| 4 | 13 |

A. $y = 3n + 1$

B. $y = 4n$

C. $y = n + 3$

D. $y = 2n + 2$

55. Which operation is needed to SOLVE for x in the equation $5x = 40$?

A. Add 5 to both sides of the equation

B. Subtract 5 from both sides of the equation

C. Divide both sides by 5

D. Multiply both sides by 5

SESSION D: MATHEMATICS — STAGE 3

56. A regular pentagon has a side length of 9 cm. What is its PERIMETER?

- A. 14 cm
- B. 81 cm
- C. 45 cm
- D. 36 cm

57. A rectangle has an area of 56 cm^2 . If its width is 7 cm, what is its LENGTH?

- A. 7 cm
- B. 8 cm
- C. 49 cm
- D. 392 cm

58. How many FACES does a cube have?

- A. 6
- B. 8
- C. 12
- D. 4

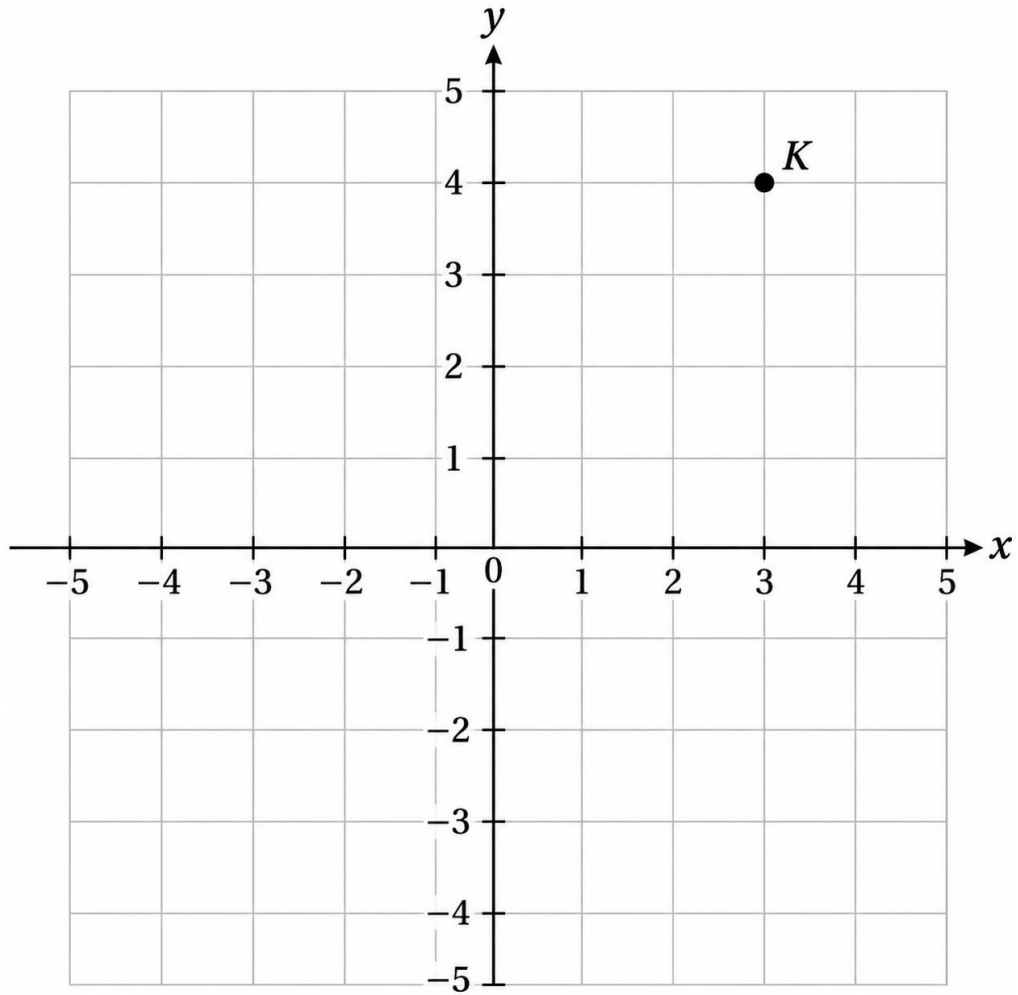
59. What is the SUM of the interior angles of any quadrilateral?

- A. 90°
- B. 180°
- C. 360°
- D. 540°

60. A point at (3, 2) is translated 4 units to the LEFT and 1 unit UP. What are the new coordinates?

- A. (7, 1)
- B. (3, -2)
- C. (-1, 1)
- D. (-1, 3)

61. On the coordinate plane below, what are the coordinates of point K?



- A. (3, 4)
- B. (4, 3)
- C. (-3, 4)
- D. (3, -4)

62. How many millilitres are there in 1.5 litres?

- A. 150 mL
- B. 1,500 mL
- C. 15,000 mL
- D. 0.0015 mL

63. Two angles are COMPLEMENTARY. If one angle measures 35° , what is the measure of the OTHER angle?

- A. 145°
- B. 35°
- C. 90°
- D. 55°

64. A cube has a side length of 4 cm. What is its VOLUME?

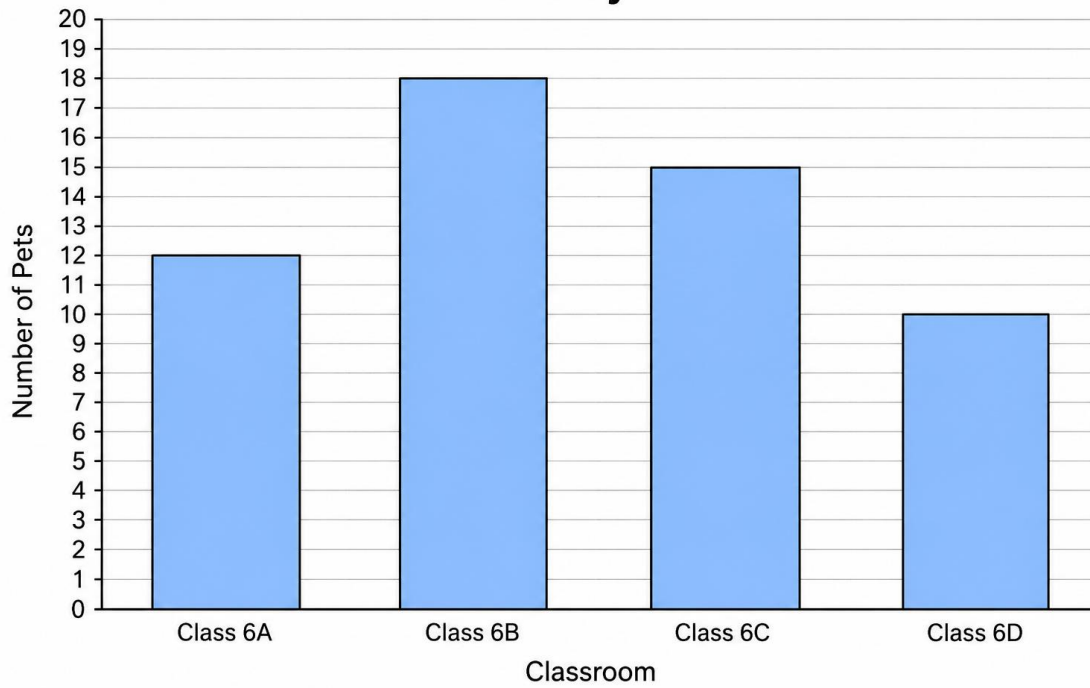
- A. 12 cm^3
- B. 16 cm^3
- C. 64 cm^3
- D. 96 cm^3

65. The mean of four numbers is 12. What is the SUM of the four numbers?

- A. 48
- B. 16
- C. 3
- D. 4

66. The bar graph below shows the number of pets owned by students in four classrooms. Which classroom has the MOST pets?

Pets Owned by Students



- A. Class 6A
- B. Class 6B
- C. Class 6C
- D. Class 6D

67. Solve for y : $y - 4 = 11$

- A. 7
- B. 44
- C. 15
- D. 4

68. Simplify the expression: $9x - 4x + 6$

- A. $11x$

- B. $13x$
- C. $5x - 6$
- D. $5x + 6$

69. A theatre has 30 rows with 24 seats in each row. How many seats are in the theatre in TOTAL?

- A. 720 seats
- B. 540 seats
- C. 600 seats
- D. 800 seats

70. A spinner is divided into 4 equal sections labelled red, blue, green, and yellow. What is the probability of NOT spinning blue?

- A. $\frac{1}{4}$
- B. $\frac{3}{4}$
- C. $\frac{1}{2}$
- D. $\frac{1}{3}$

SESSION D: MATHEMATICS — STAGE 4

71. Mia deposits \$600 into a savings account that pays 5% simple interest each year. How much interest will she earn after ONE year?

- A. \$5
- B. \$50
- C. \$20
- D. \$30

72. Owen wants to save \$480 for a new gaming console. If he saves \$20 each week, how many WEEKS will it take him to reach his goal?

- A. 12 weeks
- B. 20 weeks
- C. 24 weeks
- D. 48 weeks

73. Which of the following BEST describes DONATING?

- A. Giving money or resources to someone or an organization without expecting anything in return
- B. Lending money to a friend who promises to pay it back at the end of the month
- C. Exchanging one item for another item of approximately equal value
- D. Storing money in a savings account where it earns interest over time

74. Which of the following is an ADVANTAGE of using a credit card responsibly?

- A. The cardholder pays no interest on any unpaid balance over time
- B. The cardholder builds a credit history that helps with future loans
- C. The cardholder is automatically protected from all kinds of fraud
- D. The cardholder receives a free replacement card every single year

75. A school collected \$1,260 in a fundraiser. They divided the money equally among 9 different classes. How much money did EACH class receive?

- A. \$126
- B. \$1,251
- C. \$200
- D. \$140

ANSWER KEY & DETAILED EXPLANATIONS — SIMULATION EXAM 6

- 1. B** — The opening sentence states directly: "Aria had been babysitting her brother Leo for forty-three minutes when the power went out." This recall question has its answer in the very first line of the passage.
- 2. C** — The passage states: "The kitchen, where Aria had been finishing the dishes, went black so suddenly that she heard her own gasp." Finishing dishes in the kitchen is what she was doing at the moment the power cut.
- 3. A** — The narrator states plainly: "Leo was four years old and afraid of the dark." This is a direct-recall fact appearing in the third paragraph.
- 4. D** — The passage describes: "She felt her way along the wall to the drawer where her mother kept the candles and flashlight." The drawer storing candles and the flashlight is the explicit location given.
- 5. C** — Leo asks Aria directly: "'Are the lights broken?' he asked." This question, posed when Aria first reaches him in the living room, matches option C exactly.
- 6. A** — Aria's specific suggestion appears in the dialogue: "'Let's make a fort,' she said." The narrator then calls this "the most useful idea she had ever had," confirming that the fort is her chosen distraction.
- 7. B** — The passage states: "Aria propped up the flashlight inside the fort so it glowed warm and yellow, like a campfire." The flashlight inside the fort creates the campfire-like glow.
- 8. D** — When the thunder grows louder, the children "pretended it was a dragon stomping outside their fort." This shared game is what turns the scary noise into something playful.
- 9. C** — In the context of an "enormous, lumpy fort" built from cushions and blankets, "lumpy" describes the uneven, bumpy shape such a fort would naturally have. The fort would not be smooth, sharp, or sticky.
- 10. B** — The story closes with Aria reflecting: "She thought that maybe the way Leo would remember it was the best way of all." Her silence honours Leo's more dramatic memory of the event.
- 11. A** — Aria's care and creative thinking turn a frightening power outage into a fort full of giggles and crackers. By the end, both children remember the night fondly, which matches option A's theme about turning a scary situation into a happy memory.
- 12. OPEN-RESPONSE** — A strong Code 40 response identifies specific ways Aria helps Leo: she answers him calmly when the lights go out, finds the flashlight, sits beside him on the rug, suggests building a fort, props the flashlight inside to create a campfire glow, tells silly stories, and turns the thunder into a pretend dragon. Code 40 responses cite specific moments from the passage and explain how each action helps move Leo from frightened to giggling.

13. D — The opening paragraph defines magma and identifies it as "the secret behind every volcano," and the body of the passage explains how magma rises through cracks to become an eruption. Option D captures both the mechanism (rising hot rock) and the result (reaching the surface as a volcano).

14. B — The passage states directly: "This melted rock is called magma." Once it reaches the surface it is called lava, but before that it is magma.

15. C — The passage gives the exact figure: "The mantle is so hot — over a thousand degrees Celsius — that the rock there flows slowly, like very thick honey." This is a direct-recall detail from the second paragraph.

16. A — In context, magma rises "where two plates pull apart," and the spot where the plates meet is called the seam. A seam is the line or place where two pieces meet or join together, just like a seam in fabric joins two edges.

17. D — The passage states: "Volcanic soil is some of the richest farmland on Earth." This is one of several benefits the closing paragraphs describe; A, B, and C are not supported by the text.

18. OPEN-RESPONSE — A strong Code 40 response explains that a volcano lets us see what is normally hidden far beneath the surface — melted rock from the mantle, gases from deep inside the Earth, and the building of new land. Code 40 responses cite specific passage details (magma from the mantle, lava forming new land, ancient volcanic gases producing the air we breathe) and explain how each makes the volcano like a window we can look through.

19. B — Items in a series are separated by commas, including a comma before the final conjunction (the Oxford comma). Option B places commas correctly after "apples" and "bananas" with no extra comma after "are."

20. C — A subordinating conjunction introduces a dependent clause and shows the relationship between it and the main clause. "Because" is the subordinating conjunction in option C, creating the dependent clause "Because I forgot my umbrella." Options A and B use coordinating conjunctions, and D uses a semicolon with no conjunction at all.

21. A — A compound subject is two or more subjects joined by a conjunction, and when joined by "and" they take a plural verb. "Mateo and his sister" is the compound subject in option A, correctly paired with the plural verb "walk."

22. D — A colon may follow a complete independent clause to introduce a list. "The cabin had everything we needed" is a complete clause, so the colon and following list are correctly used. The other options place colons after fragments, which is not a correct use.

23. B — A conjunction joins words, phrases, or clauses. "But" connects the two independent clauses in the sentence, making it a coordinating conjunction. "Swimming" is a gerund, "pool" is a noun, and "closed" is a verb.

24. A — The singular possessive is formed by adding an apostrophe and an s to the noun. "Dog's collar" indicates that the collar belongs to one dog. Option B is the plural possessive form, C omits the apostrophe entirely, and D misplaces the punctuation.

25. C — A compound predicate has one subject performing two or more actions. In option C, "The students" perform both actions "completed" and "presented." Option A has a compound subject, B is a run-on, and D is a complex sentence with a relative clause.

26. B — The progressive tense uses a form of "to be" plus the present participle (verb ending in -ing). "Is painting" follows this structure exactly, while A is simple past, C is simple future, and D is past perfect.

27. D — The plural of "child" is the irregular form "children" — not formed by adding -s or by any other regular plural rule. Option D applies the irregular plural correctly.

28. A — Descriptive language uses specific adjectives and strong verbs to create a vivid image. Option A uses "crisp," "autumn," "crunched," "hurried," and "footsteps" to engage the reader's senses; the other options offer flat or vague descriptions of the same scene.

29. C — The superlative form of a one-syllable adjective is formed by adding -est. "Fastest" is the correct superlative of "fast." Options A and B incorrectly add "most" or "more" alongside the -est ending, and D uses the wrong form entirely.

30. D — A pronoun must agree in number with its antecedent. "The boys" is a plural antecedent, and "their" is a plural pronoun, so they match correctly. Options A, B, and C all pair singular antecedents (each, every, neither) with the plural "their," breaking traditional agreement.

31. OPEN-RESPONSE — A strong Code 30 or 40 response identifies one specific change to the school or community, explains why the change would be beneficial through concrete reasoning, includes specific details and examples, and organizes the argument logically. The strongest responses move beyond vague claims like "it would be better" to show clearly how the change would help others.

32. B — In 358,427, the digit 5 sits in the ten thousands place. Its value is therefore $5 \times 10,000 = 50,000$. Place value increases by a factor of 10 with each position to the left.

33. D — Multiply 45×12 by splitting one factor: $45 \times 10 = 450$ and $45 \times 2 = 90$, then add: $450 + 90 = 540$. Splitting one factor into easier parts is a reliable mental-math technique.

34. A — The fraction $7/10$ represents 7 tenths, which is written as 0.7 in decimal form. The digit 7 sits in the tenths place after the decimal point.

35. C — Find the fraction of books sold: $15/60$ simplifies to $1/4$, which equals 25%. Converting a fraction to a percent expresses the part of the whole out of 100.

36. B — The ratio 4:3 has 7 total parts. Divide the total students by the parts: $28 \div 7 = 4$ students per part. Girls have 4 parts, so $4 \times 4 = 16$ girls.

- 37. D** — Subtract pages already read from the total: $240 - 96 = 144$ pages remaining. This straightforward subtraction tracks the pages still to be read.
- 38. A** — Align the decimals and add: $6.40 + 2.78 = 9.18$. Writing 6.4 as 6.40 makes the place-value columns line up cleanly.
- 39. C** — Multiply $\frac{3}{4} \times 8$ by treating 8 as $\frac{8}{1}$: $(3 \times 8) \div (4 \times 1) = 24/4 = 6$. Multiplying a fraction by a whole number scales the numerator.
- 40. B** — Substitute $x = 5$ into $4x + 3$: $4(5) + 3 = 20 + 3 = 23$. Order of operations requires multiplication before addition.
- 41. D** — Multiply both sides by 3 to undo the division: $x = 9 \times 3 = 27$. The inverse operation isolates x on its own.
- 42. A** — The pattern adds 5 each term, giving the rule $5n$. For the 8th term: $5 \times 8 = 40$. Using the algebraic rule jumps directly to any term.
- 43. C** — The distributive property requires multiplying the outside factor by each term inside the brackets: $3(2x + 4) = 3 \cdot 2x + 3 \cdot 4 = 6x + 12$. Distribution is one of the most frequently used algebra tools.
- 44. D** — Trace the loop, adding each number from 1 to 5 to the running total: $1 + 2 + 3 + 4 + 5 = 15$. The final displayed sum is 15.
- 45. B** — Add the five values: $70 + 85 + 75 + 90 + 80 = 400$. Divide by the number of values: $400 \div 5 = 80$. The mean is the total divided by the count.
- 46. A** — A fair coin has two equally likely outcomes (heads and tails). The probability of heads is 1 favourable outcome out of 2 total, which equals $\frac{1}{2}$.
- 47. C** — Aria's row shows 6 cookie icons, and the legend states each icon represents 5 cookies. Multiply: $6 \times 5 = 30$ cookies. Pictographs are decoded by multiplying the number of icons by the value of each icon.
- 48. B** — Range equals the largest value minus the smallest value. The largest number is 35 and the smallest is 12, so the range is $35 - 12 = 23$.
- 49. D** — Total marbles = $6 + 4 + 2 = 12$. Favourable outcomes (blue) = 4, so probability = $\frac{4}{12}$, which simplifies to $\frac{1}{3}$ after dividing both numbers by 4.
- 50. A** — A factor of 36 must divide evenly into 36 with no remainder. Since $36 \div 9 = 4$ with no remainder, 9 is a factor of 36. The other options (5, 7, 11) all leave remainders when 36 is divided by them.
- 51. C** — Divide the total cupcakes by the number per box: $144 \div 12 = 12$ boxes. This direct division gives the number of full boxes the bakery can fill.

- 52. D** — Rewrite $\frac{1}{3}$ with the common denominator 6: $\frac{1}{3} = \frac{2}{6}$. Then $\frac{5}{6} + \frac{2}{6} = \frac{7}{6}$. Fractions can only be added once their denominators match.
- 53. B** — Calculate 75% of 80: $0.75 \times 80 = 60$. As a check, 75% is three-quarters, and three-quarters of 80 is $80 - 20 = 60$.
- 54. A** — Test the equation $y = 3n + 1$ against each row: $3(1) + 1 = 4 \checkmark$, $3(2) + 1 = 7 \checkmark$, $3(3) + 1 = 10 \checkmark$, $3(4) + 1 = 13 \checkmark$. The equation matches every row of the table.
- 55. C** — To isolate x in $5x = 40$, divide both sides by 5. The inverse operation undoes the multiplication, giving $x = 8$. The balance principle requires the same operation on both sides.
- 56. C** — A regular pentagon has five equal sides. Perimeter = number of sides \times side length = $5 \times 9 = 45$ cm. For any regular polygon, the perimeter equals the number of sides times one side length.
- 57. B** — Area of a rectangle = length \times width, so length = area \div width = $56 \div 7 = 8$ cm. Dividing the area by the known dimension reveals the unknown dimension.
- 58. A** — A cube has six square faces: top, bottom, front, back, left, and right. Each face is congruent to every other.
- 59. C** — The sum of the interior angles of any quadrilateral is always 360° . This is true regardless of the quadrilateral's shape or whether it is regular or irregular.
- 60. D** — Translating 4 units left subtracts 4 from the x-coordinate; translating 1 unit up adds 1 to the y-coordinate. Applied to (3, 2): $(3 - 4, 2 + 1) = (-1, 3)$.
- 61. A** — Point K sits 3 units to the right of the y-axis (so $x = 3$) and 4 units above the x-axis (so $y = 4$), giving the coordinates (3, 4). Coordinates are always written in the order (x, y).
- 62. B** — Since 1 litre equals 1,000 millilitres, multiply by 1,000 to convert: $1.5 \times 1,000 = 1,500$ mL. Moving from a larger unit to a smaller unit requires multiplication.
- 63. D** — Complementary angles sum to 90° . So the unknown angle is $90^\circ - 35^\circ = 55^\circ$. This contrasts with supplementary angles, which sum to 180° .
- 64. C** — Volume of a cube = side \times side \times side = $4 \times 4 \times 4 = 64$ cm³. The unit is cubed because volume measures three-dimensional space.
- 65. A** — Mean = sum \div count, so sum = mean \times count = $12 \times 4 = 48$. Multiplying the mean by the number of values returns the total.
- 66. B** — From the bar graph, Class 6B has 18 pets, which is more than Class 6A (12), Class 6C (15), or Class 6D (10). The tallest bar identifies the class with the most pets.
- 67. C** — Add 4 to both sides to isolate y : $y = 11 + 4 = 15$. The inverse operation undoes the subtraction.

- 68. D** — Combine like terms by subtracting coefficients of x : $9x - 4x = 5x$. Add the constant separately: $+ 6$. The simplified expression is $5x + 6$.
- 69. A** — Multiply rows by seats per row: $30 \times 24 = 720$ seats. Breaking it down: $30 \times 24 = (30 \times 20) + (30 \times 4) = 600 + 120 = 720$.
- 70. B** — A spinner with 4 equal sections has 3 sections that are not blue (red, green, yellow). Probability of not blue = 3 favourable outcomes \div 4 total = $3/4$.
- 71. D** — Simple interest = principal \times rate \times time = $\$600 \times 0.05 \times 1 = \30 . The 5% rate is converted to its decimal form 0.05 before multiplying.
- 72. C** — Divide the savings goal by the weekly amount: $\$480 \div \$20 = 24$ weeks. This division converts a financial goal into a clear time frame.
- 73. A** — Donating means giving money or resources to a person or organization without expecting anything in return. The other options describe lending (B), trading (C), and saving (D), which all involve return or compensation.
- 74. B** — Responsible credit card use over time builds a positive credit history, which lenders consider when deciding on future loans, car loans, or mortgages. The other options are inaccurate: unpaid balances do accrue interest, fraud protection is not absolute, and cards are not replaced for free each year.
- 75. D** — Divide the total amount by the number of classes: $\$1,260 \div 9 = \140 per class. Equal sharing always uses division, with the total as the dividend and the number of recipients as the divisor.