

# SIMULATION EXAM 2 (75 QUESTIONS)

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## SESSION A: READING — NARRATIVE TEXT

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

"Bibi's Bread"

When Imani arrived at her grandmother's apartment that Saturday morning, the kitchen smelled like flour and warm milk. Bibi — that was what everyone called her grandmother — was already standing at the counter, a wooden bowl in front of her, sleeves rolled up to her elbows.

"You're late," Bibi said, without looking up.

"I'm twelve minutes late," Imani said.

"That's twelve minutes the dough did not get to rise." Bibi tilted her head toward the bowl. "Wash your hands. We start now."

Imani washed her hands and dried them on the tea towel. She had been to Bibi's apartment every Saturday for as long as she could remember, but until last month, she had never asked to help with the bread. Then her cousin Ayo had posted a video of himself and Bibi making the bread together, and Imani had felt something twist in her chest. She wanted to learn too.

The flour was already in the bowl. Bibi added warm water, a pinch of salt, and a tiny brown packet she said was yeast. "Now we mix," she said. "But not with the spoon. With your hands."

Imani plunged her hands into the bowl. The dough was sticky and strange, sticking to her fingers in great pale ropes.

"How long do we mix?" she asked.

"Until it stops sticking to the bowl."

Imani mixed. After what felt like ten minutes, the dough was still sticking. "Bibi, how long is this going to take?"

Bibi looked at her sideways. "How long does anything good take?"

Imani sighed and kept mixing.

After another long while, the dough began to pull away from the sides of the bowl into a single smooth lump. Bibi nodded once. "Good. Now we let it rest."

"For how long?"

"An hour."

"An hour?"

"While we wait, we will drink tea, and you will tell me about school, and I will tell you about my grandmother, who taught me to make this bread when I was nine years old."

Imani sat down at the small kitchen table. Bibi poured tea. The bread sat on the counter under a clean white cloth, rising slowly. Outside, a bus went by. Inside, Bibi began to talk — about her childhood in a small town, about the bakery her grandmother had run, about a sister Imani had never met who had died very young.

When the hour was over, the dough had doubled in size. Bibi punched it down with her fist and they shaped it into a round loaf. Then it had to rise again, for another forty minutes. Then it baked for thirty.

When Imani finally tasted the bread — warm, soft, crusted just slightly on top — she understood what Bibi had meant about how long good things take. She also understood, in a quieter way, that the bread was not really the point.

1. At the beginning of the passage, where is Imani when she arrives at her grandmother's home?

- A. In the bedroom selecting an apron to wear before joining Bibi
- B. In the living room waiting for Bibi to finish another chore
- C. At the front door speaking with another relative who has visited
- D. In the kitchen, where the bread-making has already begun

2. Which word BEST describes Bibi based on her actions throughout the passage?

- A. Patient — she takes her time and values the slow process
- B. Forgetful — she misplaces the ingredients she needs that morning
- C. Anxious — she worries about getting the recipe exactly right
- D. Distant — she barely speaks to Imani during the entire visit

3. Why did Imani ask to help with the bread for the FIRST time last month?

- A. Her parents told her she needed to learn family recipes for school
- B. She wanted something interesting to discuss with her teacher
- C. She saw a video of her cousin Ayo making the bread with Bibi
- D. She had failed at her last cooking attempt and wanted another try

4. What does the word "plunged" mean in the sentence "Imani plunged her hands into the bowl"?

- A. Lifted gently and held just above the bowl's surface
- B. Pushed quickly and firmly into the mixture inside

- C. Decorated carefully with small designs around the rim
- D. Removed slowly and with great care from the dough

5. How does Imani's attitude toward the bread-making process CHANGE during the passage?

- A. She becomes more frustrated and decides to give up partway through
- B. She loses interest in the bread as soon as the dough has been mixed
- C. She continues to find the process boring even after tasting the result
- D. She moves from impatience to a deeper understanding of why it takes so long

6. When Bibi asks, "How long does anything good take?" what is she suggesting?

- A. Making bread is the only worthwhile activity to do on a Saturday
- B. Imani should leave the kitchen and try again on another weekend
- C. Worthwhile things often require time and patience to produce
- D. The bread will not turn out well no matter how long Imani waits

7. What does Bibi do AFTER mixing the dough but BEFORE shaping the loaf?

- A. Lets the dough rest under a clean cloth for about one hour
- B. Adds extra flour to make the dough less sticky to handle
- C. Bakes the bread immediately in the kitchen oven
- D. Tells Imani to go home and return another day to continue

8. At the end of the passage, Imani realizes that "the bread was not really the point." What is the MOST LIKELY meaning of this realization?

- A. Imani has decided that she does not actually enjoy eating the bread
- B. The bread turned out badly and was not worth all of the effort

- C. Bibi was only pretending to teach Imani about baking that morning
- D. The real value was in the time, conversation, and connection with Bibi

9. Which detail from the passage helps the reader understand that the kitchen feels warm and familiar?

- A. Bibi reminds Imani that she is twelve minutes late
- B. The kitchen smells like flour and warm milk when Imani arrives
- C. A city bus passes by on the street outside the window
- D. The dough sticks to Imani's fingers in great pale ropes

10. Which word BEST describes Imani in the EARLY part of the passage?

- A. Impatient — she keeps asking how long each step will take
- B. Skilled — she already knows how to handle the bread dough
- C. Lazy — she refuses to help with any of the actual work
- D. Bored — she does not pay attention to what Bibi is doing

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

- A. Children should always listen to their grandparents without question
- B. Cooking is the most important way to learn about a family's history
- C. Traditions passed from one generation to the next carry meaning beyond what they appear to be
- D. Modern technology has made traditional ways of doing things unnecessary

12. Open-Response. Explain how Bibi influences Imani's understanding of the bread-making process. Use specific details from the passage to support your answer.

(Write your response in the space provided.)



## "What Trees Remember"

If you have ever seen a tree stump in a forest, you have probably noticed the pattern of circles that spreads outward from the centre. These circles are called tree rings, and each one tells a story about a year in the tree's life. By studying tree rings, scientists can learn things about the past that no human being was around to record.

Tree rings form because of how trees grow. During the warm months of spring and summer, trees grow quickly, producing wide bands of pale wood. During the cooler months of autumn and winter, the growth slows down, producing thin bands of darker wood. Together, one pale band and one dark band make up a single ring — one full year of the tree's life. By counting the rings, scientists can determine the exact age of the tree.

But tree rings reveal more than just age. A wide ring means the tree had a good growing year — plenty of rain, warm temperatures, and sunlight. A narrow ring means the year was harder, perhaps because of drought, cold, or other stresses. By studying patterns across many trees in the same region, scientists can reconstruct the climate of a place going back hundreds, even thousands, of years.

Some ancient trees, such as the bristlecone pines of California, are more than four thousand years old. The rings of these trees record events that took place long before any written history of the region existed. Tree-ring scientists, called dendrochronologists, also study the rings of wood used in old buildings, which can help historians date when those buildings were built.

The next time you see a tree stump, take a moment to look at the rings. You are looking at a quiet record of every year that tree was alive — a record more accurate than many historical documents.

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

- A. Tree rings reveal information about a tree's age and the conditions it lived through
- B. Bristlecone pines in California are the oldest known living trees on Earth
- C. Wood used in very old buildings can be dated by counting its growth rings
- D. Dendrochronologists are scientists who study tree rings for a living

14. According to the passage, what causes a tree to produce a WIDE ring in a given year?

- A. Drought, cold weather, and limited hours of sunlight
- B. The presence of insects burrowing into the bark
- C. Frequent cutting of the tree's lower branches

D. Plenty of rain, warm temperatures, and sunlight

15. What does the word "reconstruct" mean as it is used in the third paragraph?

- A. To tear down and remove all of the existing evidence
- B. To recreate or piece back together something from the past
- C. To memorize information from a science textbook
- D. To plant new trees in areas that have been cleared

16. According to the passage, what does it mean when a tree ring is NARROW?

- A. The tree was extremely young that particular year
- B. The tree was being measured incorrectly by scientists
- C. The year was hard for the tree, perhaps because of drought or cold
- D. The tree had been recently planted by a human gardener

17. Why did the author MOST LIKELY write this passage?

- A. To explain how tree rings give scientists information about the past
- B. To convince readers to plant more trees in their neighbourhoods
- C. To describe a vacation visit to California's ancient bristlecone pines
- D. To compare living trees with petrified wood found underground

18. Open-Response. Explain why the author calls tree rings "a quiet record" of a tree's life. Use specific details from the passage to support your answer.

(Write your response in the space provided.)



## SESSION C: WRITING — CONVENTIONS & COMPOSITION

Answer Questions 19 through 30 by selecting the best answer. Then complete the writing prompt in Question 31.

19. Which option is a COMPLETE sentence and NOT a sentence fragment?

- A. Walking slowly down the rainy street last evening alone
- B. Because the homework was much too long for one night
- C. The book on the shelf with the broken spine and yellow pages
- D. The dog barked loudly at the passing mail carrier this morning

20. Which sentence uses commas correctly?

- A. I packed apples sandwiches and water, in my lunchbox
- B. I packed apples, sandwiches, and water in my lunchbox
- C. I packed apples, sandwiches and, water in my lunchbox
- D. I packed, apples, sandwiches, and water in my lunchbox

21. Which sentence uses apostrophes correctly?

- A. The cats whiskers were covered in dust from the shelf
- B. The cat's whiskers were covered, in dust from the shelf
- C. The cat's whiskers were covered in dust from the shelf
- D. The cats whisker's were covered in dust from the shelf

22. Which sentence is written with CONSISTENT verb tense?

- A. The team practised every morning and improved week by week

- B. The team practises every morning and improved week by week
- C. The team practised every morning and improves week by week
- D. The team practises every morning and was improving week by week

23. Which word in the sentence below is a NOUN?

The runner crossed the finish line quickly.

- A. crossed
- B. quickly
- C. the
- D. runner

24. Which sentence is written in PASSIVE voice?

- A. The chef prepared a delicious meal for the guests
- B. The painting was discovered in the old dusty attic
- C. The students built a model of the solar system
- D. Maya wrote a poem about her great-grandmother

25. Which sentence is capitalized correctly?

- A. We visited the Royal Ontario Museum last Saturday
- B. We visited the royal ontario museum last saturday
- C. We Visited The Royal Ontario Museum Last Saturday
- D. We visited the Royal ontario Museum last saturday

26. Which sentence shows correct pronoun–antecedent agreement?

- A. Every player on the team must bring their own water bottle
- B. The boys carried their backpacks up the steep mountain hill
- C. Each girl in the class lost their library book this week
- D. Neither of the dogs wagged their tail at the new visitor

27. Which sentence uses punctuation correctly?

- A. The rain stopped, the children went outside to play tag
- B. The rain stopped the children went outside to play tag
- C. The rain stopped, and the children went outside to play tag
- D. The rain stopped and, the children went outside to play tag

28. Which transitional phrase BEST completes the sentence?

I forgot to set my alarm; \_\_\_\_\_, I missed the school bus.

- A. however
- B. as a result
- C. for example
- D. on the other hand

29. Which option BEST combines these two sentences using an adjective clause?

The teacher gave us a quiz. The teacher arrived late.

- A. The teacher gave us a quiz. He arrived late this morning.

- B. The teacher gave us a quiz, and the teacher arrived late.
- C. The teacher who gave us a quiz, was arriving late today.
- D. The teacher, who arrived late, gave us a quiz this morning.

30. Which sentence punctuates the dialogue correctly?

- A. "Lets go to the movies tomorrow night, Maya said."
- B. Lets go to the movies tomorrow night, "Maya said."
- C. "Let's go to the movies tomorrow night," Maya said.
- D. "Let's go to the movies tomorrow night, Maya said."

31. Open-Response — Writing Prompt.

Think about a place that holds special meaning for you. Write a piece in which you describe the place and explain why it is meaningful to you.

**Be sure to:**

- Have a clear focus and main idea
- Include specific details that help the reader picture the place
- Organize your ideas logically
- Use correct grammar, spelling, and punctuation

(Write your response in the space provided.)

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32. What is the value of the digit 4 in the number 5,438,219?

- A. 400,000
- B. 40,000
- C. 4,000
- D. 4,000,000

33. Which list shows the decimals ordered from LEAST to GREATEST?

- A. 0.5, 0.45, 0.405, 0.4
- B. 0.4, 0.405, 0.45, 0.5
- C. 0.405, 0.4, 0.45, 0.5
- D. 0.5, 0.4, 0.45, 0.405

34. Sara has \$25.00. She buys a book for \$9.45 and a pencil case for \$3.78. How much money does she have left?

- A. \$11.23
- B. \$13.55
- C. \$12.77
- D. \$11.77

35. Which fraction is EQUIVALENT to  $\frac{12}{16}$ ?

- A.  $\frac{4}{8}$
- B.  $\frac{6}{12}$
- C.  $\frac{3}{4}$
- D.  $\frac{4}{12}$

36. Round 7.62 to the nearest whole number.

- A. 8
- B. 7.6
- C. 7
- D. 7.62

37. What is 30% of 50?

- A. 25
- B. 5
- C. 30
- D. 15

38. What is  $\frac{2}{5}$  of 25?

- A. 5
- B. 10
- C. 15
- D. 12.5

39. What is  $8.4 \div 4$ ?

- A. 1.1
- B. 2.0
- C. 2.1
- D. 2.4

40. Which number is divisible by 9?

A. 234

B. 248

C. 415

D. 521

41. Evaluate the expression  $2x + 9$  when  $x = 4$ .

A. 11

B. 15

C. 17

D. 24

42. Look at this pattern: 3, 7, 11, 15, ... What is the NEXT term in the pattern?

A. 17

B. 18

C. 19

D. 20

43. Solve for  $x$ :  $x - 5 = 12$

A. 7

B. 17

C. 60

D. 5

44. Simplify the expression:  $3a + 5a - 2a$

- A.  $6a$
- B.  $8a$
- C.  $10a$
- D.  $-6a$

45. Which statement BEST describes the rule for this pattern?

5, 9, 13, 17, 21, ...

- A. Add 5 to the previous term
- B. Multiply each term by 2 then subtract 1
- C. Subtract 4 from each previous term
- D. Start at 5 and add 4 each time

46. What is the mean of these numbers: 4, 8, 6, 10, 12?

- A. 8.2
- B. 8
- C. 10
- D. 6

47. What is the mode of this data set: 3, 5, 7, 5, 9, 5, 11, 3?

- A. 3
- B. 7
- C. 5

D. 8

48. What is the range of these values: 17, 23, 8, 14, 19?

A. 15

B. 8

C. 23

D. 16.2

49. A standard six-sided die is rolled once. What is the probability of rolling an EVEN number?

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

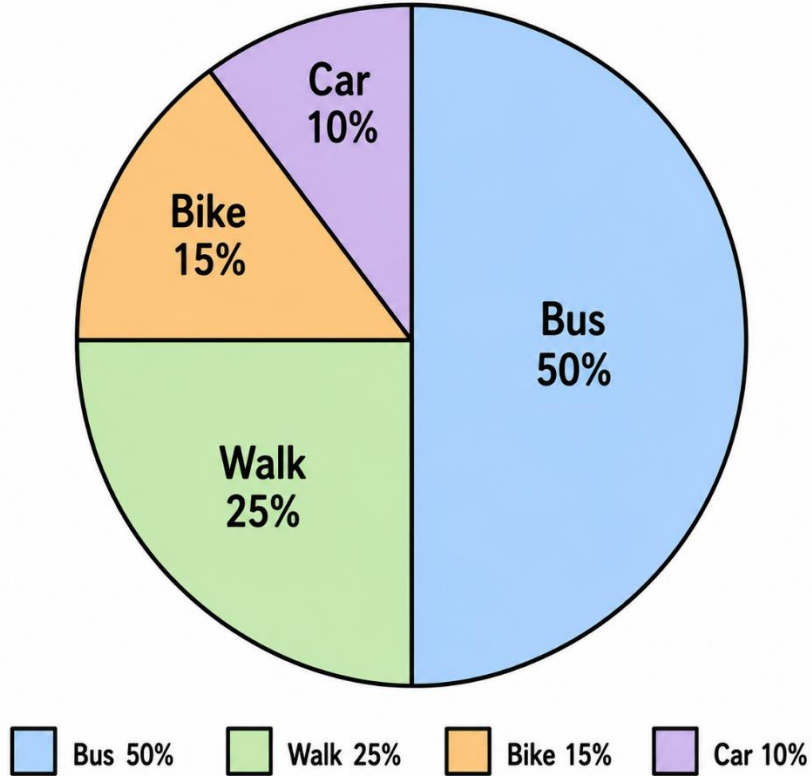
B.  $\frac{1}{2}$

C.  $\frac{1}{3}$

D.  $\frac{2}{3}$

50. The circle graph below shows how students in Mr. Patel's class travel to school. What fraction of students walk to school?

**Figure PQ-1: How Students Travel to School**



- A.  $\frac{1}{2}$
- B.  $\frac{1}{3}$
- C.  $\frac{1}{8}$
- D.  $\frac{1}{4}$

**SESSION D: MATHEMATICS — STAGE 2 (CONTINUED)**

Answer Questions 51 through 75 by selecting the best answer.

51. A baker is making muffins. The recipe calls for  $\frac{3}{4}$  cup of sugar to make 12 muffins. How much sugar is needed to make 24 muffins?

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

C.  $1\frac{1}{2}$  cups

D. 2 cups

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

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

B.  $\frac{2}{9}$

C.  $\frac{1}{9}$

D.  $\frac{2}{3}$

53. A car travels at a speed of 60 km/h. How far does it travel in 2 hours and 30 minutes?

A. 90 km

B. 150 km

C. 120 km

D. 180 km

54. Which expression is EQUIVALENT to  $4(x + 3)$ ?

A.  $4x + 3$

B.  $x + 12$

C.  $4x + 7$

D.  $4x + 12$

55. Solve for n:  $5n - 6 = 19$

A. 5

B. 13

C. 25

D. 2.6

56. Look at the pseudocode below.

IF the number is divisible by 2 THEN display "EVEN"

ELSE display "ODD"

What will the code display if the input number is 17?

A. EVEN

B. 17

C. ODD

D. ERROR

57. Look at this growing pattern: 2, 6, 10, 14, 18, ... What is the 12th term in the pattern?

A. 44

B. 46

C. 48

D. 50

58. A square has a side length of 7 cm. What is its perimeter?

A. 14 cm

B. 21 cm

C. 49 cm

D. 28 cm

59. What is the area of a rectangle with a length of 9 m and a width of 4 m?

- A.  $36 \text{ m}^2$
- B.  $13 \text{ m}^2$
- C.  $26 \text{ m}^2$
- D.  $18 \text{ m}^2$

60. A triangular prism has 2 triangular faces and 3 rectangular faces. How many edges does it have in total?

- A. 6
- B. 5
- C. 9
- D. 12

61. The point  $Q(-3, 4)$  is translated 5 units right and 2 units down. What are the coordinates of  $Q'$ ?

- A.  $(-8, 6)$
- B.  $(2, 2)$
- C.  $(8, 6)$
- D.  $(-5, -2)$

62. What is the complement of a  $38^\circ$  angle?

- A.  $142^\circ$
- B.  $38^\circ$
- C.  $90^\circ$
- D.  $52^\circ$

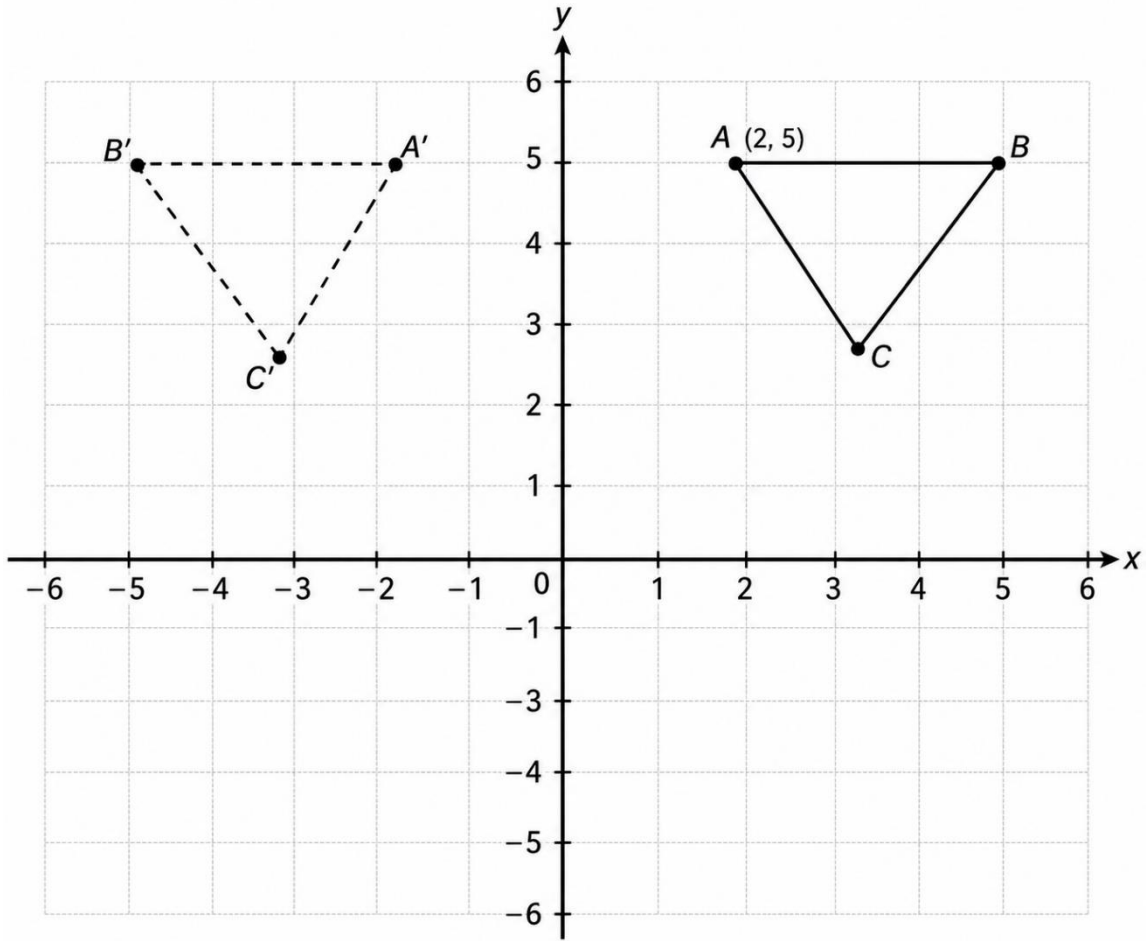
63. Which transformation moves a shape but does NOT change its size, shape, or orientation?

- A. Translation
- B. Reflection
- C. Rotation
- D. Resizing

64. Convert 4.2 kilometres to metres.

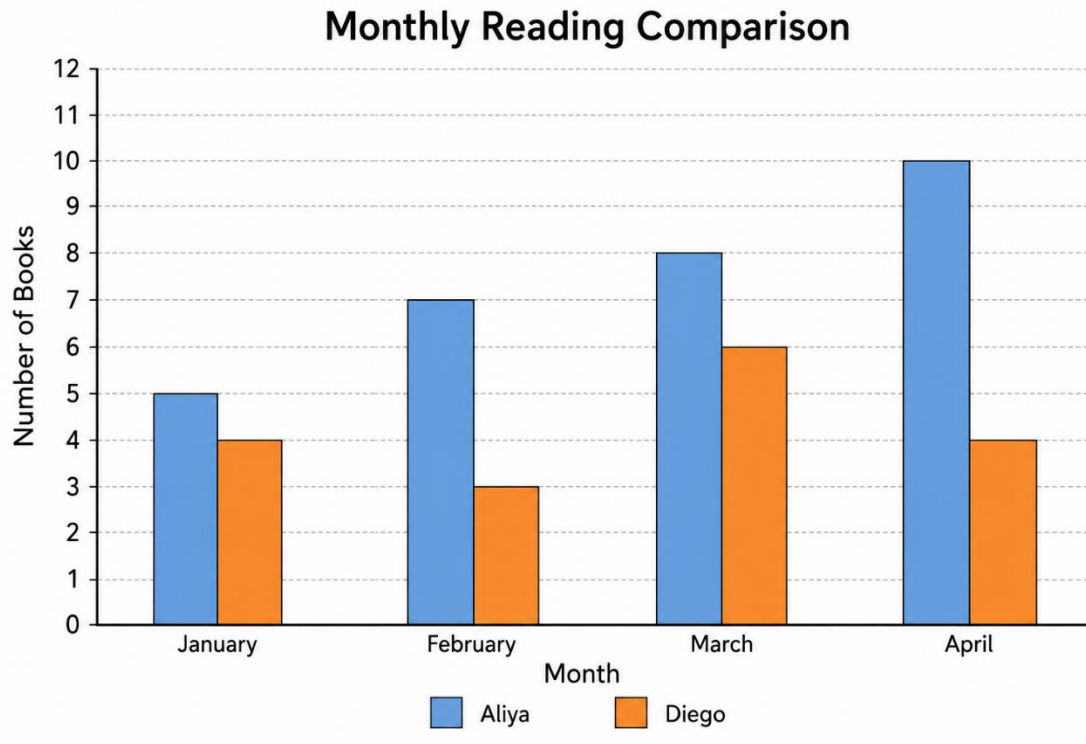
- A. 42 m
- B. 420 m
- C. 4,200 m
- D. 42,000 m

65. In the figure below, triangle ABC is reflected across the y-axis to create triangle A'B'C'. If point A is located at (2, 5), what are the coordinates of A'?



- A. (5, -2)
- B. (2, -5)
- C. (-5, 2)
- D. (-2, 5)

66. The double bar graph below shows the number of books read by two students each month from January to April. In which month did the DIFFERENCE between their reading totals reach its highest value?



- A. January
- B. March
- C. February
- D. April

67. A spinner is divided into 8 equal sections numbered 1 through 8. What is the probability of spinning a number GREATER than 5?

- A.  $\frac{3}{8}$
- B.  $\frac{5}{8}$
- C.  $\frac{1}{2}$
- D.  $\frac{1}{3}$

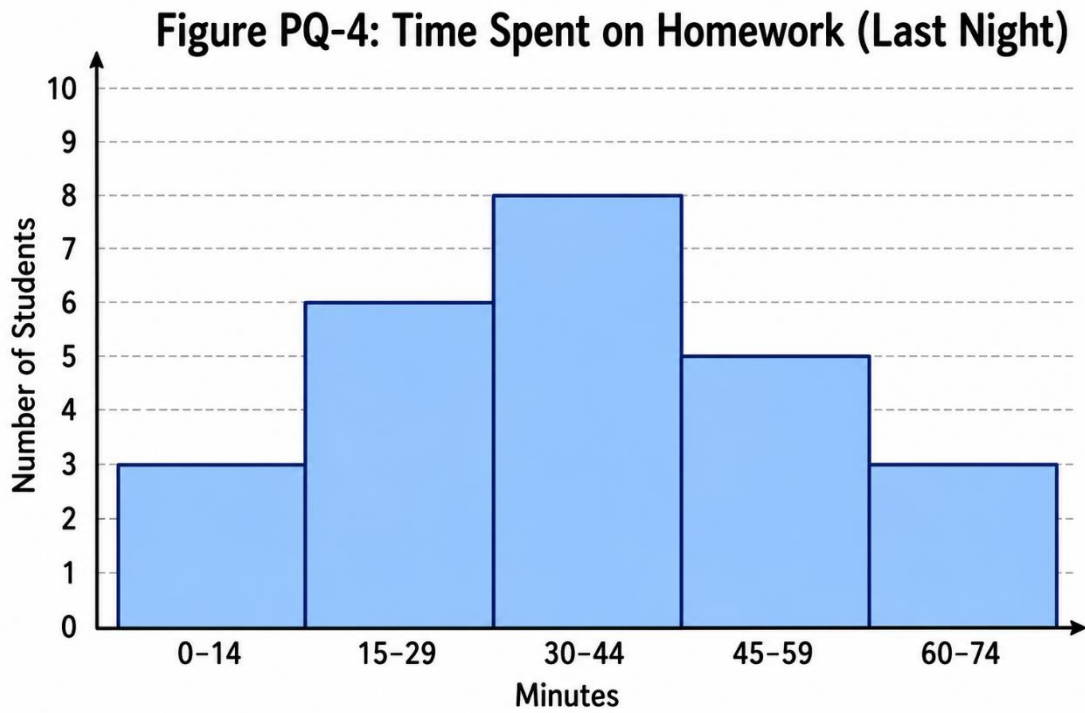
68. A bag of trail mix contains 2 cups of peanuts, 1 cup of raisins, and 1 cup of chocolate chips. What is the ratio of peanuts to the total trail mix, in simplest form?

- A. 2:3
- B. 1:1
- C. 1:2
- D. 2:1

69. Maria saves \$4 every week. How many weeks will it take her to save enough money to buy a \$52 bicycle helmet?

- A. 4 weeks
- B. 10 weeks
- C. 12 weeks
- D. 13 weeks

70. Look at the histogram below. How many students in total are represented in the data?



- A. 5

- B. 25
- C. 30
- D. 15

71. Owen deposits \$300 in a savings account that pays 3% simple interest per year. How much interest will he earn after 2 years?

- A. \$3
- B. \$6
- C. \$30
- D. \$18

72. Which of the following is a DISADVANTAGE of using a credit card?

- A. Unpaid balances are charged high interest, which can grow quickly
- B. Credit cards offer no fraud protection for the cardholder
- C. Credit cards cannot be used to make purchases online
- D. Credit cards are accepted at only a few stores in most cities

73. Liam wants to save \$480 in 12 months. He plans to save the same amount each month. How much should he save each month?

- A. \$24
- B. \$48
- C. \$40
- D. \$60

74. Which of the following BEST describes BORROWING?

- A. Giving money or goods to someone without expecting any return
- B. Receiving money or resources that must be returned later, often with interest
- C. Exchanging one item for another item of approximately equal value
- D. Storing money in a long-term savings account that pays interest

75. A car uses 7 litres of gas to travel 100 kilometres. How many litres of gas will the car use to travel 350 kilometres at the same rate?

- A. 21 L
- B. 49 L
- C. 35 L
- D. 24.5 L

## ANSWER KEY & DETAILED EXPLANATIONS — SIMULATION EXAM 2

**1. D** — The opening lines describe Imani arriving to find "the kitchen smelled like flour and warm milk" and Bibi already at the counter with a bowl in front of her. The setting is explicitly the kitchen, and bread-making has already begun.

**2. A** — Bibi pauses for tea while the dough rises, tells stories during the wait, and accepts that good bread takes hours. Her actions consistently model patience, while none of the distractors (forgetful, anxious, distant) match the text.

**3. C** — The passage states directly: "Then her cousin Ayo had posted a video of himself and Bibi making the bread together, and Imani had felt something twist in her chest. She wanted to learn too." The video is the explicit trigger for her request.

**4. B** — In context, Imani "plunged her hands into the bowl" of dough — a quick, firm pushing motion. The other options (lifting, decorating, removing) describe the opposite or unrelated actions.

**5. D** — Early in the passage, Imani repeatedly asks how long things will take and sighs at the answers. By the end, she understands "what Bibi had meant about how long good things take" — a clear shift from impatience to acceptance.

**6. C** — Bibi's question is rhetorical: it invites Imani to recognize that quality outcomes typically demand patience and time. The bread itself becomes the example of this larger principle.

**7. A** — The passage gives a clear sequence: mix, then "we let it rest" for an hour, then shape the loaf. The resting step under the cloth happens between mixing and shaping.

**8. D** — While the dough rises, Bibi shares family stories, talks about her own grandmother, and pours tea. Imani's realization is that the lesson was about connection and shared time, not the loaf itself.

**9. B** — Sensory details like "the kitchen smelled like flour and warm milk" immediately establish warmth and familiarity. The other options describe time, traffic, or texture rather than the comforting atmosphere of the room.

**10. A** — Imani asks "How long do we mix?" and "Bibi, how long is this going to take?" and reacts with "An *hour*?" in disbelief. Her repeated questions about time are the textbook sign of impatience.

**11. C** — The story closes with Imani realizing "the bread was not really the point." This insight — that traditions hold deeper meaning than their surface activity — is the central theme, which the other options either oversimplify or contradict.

**12. OPEN-RESPONSE** — A strong Code 40 response identifies specific ways Bibi shapes Imani's understanding: she insists on hands-only mixing, refuses to rush the rising time, fills the wait with family stories, and answers Imani's impatience with the rhetorical question "How long does anything good take?" Code 40 responses cite specific moments from the passage and explain how each one moves Imani from impatience to deeper appreciation.

**13. A** — The passage opens by introducing tree rings as a record of "a year in the tree's life" and devotes its body to explaining what age, climate, and historical information rings reveal. Option A captures both the topic (tree rings) and the scope (age plus living conditions).

**14. D** — The third paragraph states: "A wide ring means the tree had a good growing year — plenty of rain, warm temperatures, and sunlight." This is the direct cause of wide-ring formation given in the passage.

**15. B** — Scientists use tree-ring data to "reconstruct the climate of a place going back hundreds, even thousands, of years." In context, reconstruct means to recreate or piece back together past conditions from available evidence.

**16. C** — The passage explains that a narrow ring "means the year was harder, perhaps because of drought, cold, or other stresses." Narrow rings signal poor growing conditions, not youth or measurement error.

**17. A** — Every paragraph explains some aspect of how tree rings work and what they reveal. The purpose is informational — to explain a scientific process — rather than persuasive, narrative, or comparative.

**18. OPEN-RESPONSE** — A strong Code 40 response explains "quiet" by noting that trees record information silently, without speaking or writing, year after year. Strong responses cite specific evidence: rings reveal age, climate conditions, and historical events; bristlecone pines preserve thousands of years of data; and the record is "more accurate than many historical documents." Code 40 responses connect each piece of evidence to the idea of a silent, reliable, long-term record.

- 19. D** — A complete sentence requires both a subject and a finite verb. "The dog barked loudly at the passing mail carrier" has both, while options A (participial phrase), B (dependent clause), and C (noun phrase with no verb) are fragments.
- 20. B** — Items in a series are separated by commas, including a comma before the conjunction in the final pair (the Oxford comma). Option B places commas correctly after "apples" and "sandwiches" and before "and water."
- 21. C** — The possessive form of a singular noun is formed by adding 's. "Cat's whiskers" correctly shows that the whiskers belong to the cat. The other options either omit the apostrophe or place it incorrectly.
- 22. A** — Both verbs in option A ("practised" and "improved") are in the simple past tense. The other options mix past and present tenses within the same sentence, breaking tense consistency.
- 23. D** — A noun names a person, place, thing, or idea. Among the four options, "runner" is the only noun — it names a person performing the action. "Crossed" is a verb, "quickly" is an adverb, and "the" is an article.
- 24. B** — Passive voice has the subject receiving the action: "The painting was discovered" places the painting (subject) in the receiving position, with the action done to it. The other sentences are active, with the subject performing the action.
- 25. A** — Proper nouns (Royal Ontario Museum, Saturday) are capitalized; common words and articles are not. Option A applies the rule consistently, while the other options under-capitalize or over-capitalize.
- 26. B** — "The boys" is a plural antecedent that takes the plural pronoun "their." This produces correct number agreement. Options A, C, and D pair singular antecedents (every player, each girl, neither) with the plural "their," creating traditional agreement errors.
- 27. C** — Two independent clauses joined into one sentence require a comma followed by a coordinating conjunction. "The rain stopped, and the children went outside" places the comma correctly before "and." Option A produces a comma splice; B is a run-on; D misplaces the comma after the conjunction.
- 28. B** — "As a result" signals a cause-and-effect relationship between forgetting the alarm and missing the bus. The other options signal contrast (however, on the other hand) or illustration (for example), none of which fit this cause-and-effect link.
- 29. D** — An adjective clause modifies a noun and is set off by commas when it provides extra information. "The teacher, who arrived late, gave us a quiz" places the clause correctly between commas, modifying "teacher."
- 30. C** — Dialogue punctuation requires the comma inside the closing quotation mark and a dialogue tag beginning with a lowercase letter. Option C ("Let's go to the movies tomorrow night," Maya said.) applies both rules correctly, while the others misplace quotation marks or omit the apostrophe in "Let's."

**31. OPEN-RESPONSE** — A strong Code 30/40 response describes a specific meaningful place with vivid sensory details, explains its significance through personal connection or memory, organizes ideas into a clear introduction–body–conclusion structure, and applies grammar and punctuation conventions accurately. The strongest responses show *why* the place matters through specific examples rather than vague statements like "I like it there."

**32. A** — In 5,438,219, the digit 4 sits in the hundred thousands place. Its value is therefore  $4 \times 100,000 = 400,000$ . Place value increases by a factor of 10 with each position to the left.

**33. B** — Aligning decimals by place value: 0.400, 0.405, 0.450, 0.500. Comparing left to right, the order from least to greatest is 0.4, 0.405, 0.45, 0.5.

**34. D** — Total spent =  $\$9.45 + \$3.78 = \$13.23$ . Money left =  $\$25.00 - \$13.23 = \$11.77$ . Multi-step money problems require careful tracking of subtraction across decimal places.

**35. C** — Simplify  $12/16$  by dividing both numerator and denominator by their greatest common factor, 4:  $12 \div 4 = 3$  and  $16 \div 4 = 4$ . The equivalent fraction in lowest terms is  $3/4$ .

**36. A** — To round 7.62 to the nearest whole number, look at the tenths digit (6). Since  $6 \geq 5$ , round up: 7 becomes 8. The hundredths digit does not affect this round.

**37. D** —  $30\%$  of  $50 = 0.30 \times 50 = 15$ . As a check,  $10\%$  of  $50 = 5$ , and  $30\%$  is three times that, which equals 15.

**38. B** — To find  $2/5$  of 25, divide 25 by 5 ( $= 5$ ), then multiply by 2:  $5 \times 2 = 10$ . The "of" in fraction problems always indicates multiplication.

**39. C** — Dividing a decimal by a whole number proceeds as standard division, with the decimal point placed in the quotient directly above the decimal in the dividend:  $8.4 \div 4 = 2.1$ .

**40. A** — A number is divisible by 9 when its digit sum is a multiple of 9. For 234:  $2 + 3 + 4 = 9$ , which is divisible by 9. None of the other digit sums (14, 10, 8) is a multiple of 9.

**41. C** — Substitute  $x = 4$  into  $2x + 9$ :  $2(4) + 9 = 8 + 9 = 17$ . Order of operations requires multiplication before addition. Option A results from incorrectly adding before multiplying. Option B suggests a calculation error in the addition step. Option D might result from misapplying the distributive property or another calculation error.**42. C** — Each term in the pattern increases by 4. The next term after 15 is  $15 + 4 = 19$ . Identifying the constant common difference is the key step in extending linear patterns.

**43. B** — To isolate  $x$ , add 5 to both sides:  $x = 12 + 5 = 17$ . The balance principle requires the same operation on both sides of an equation.

**44. A** — Combine like terms by adding and subtracting coefficients:  $3 + 5 - 2 = 6$ , so  $3a + 5a - 2a = 6a$ . The variable stays the same when like terms are combined.

- 45. D** — The pattern starts at 5 and adds 4 each step ( $9 - 5 = 4$ ,  $13 - 9 = 4$ , and so on). Option D captures both the starting value and the constant increase, which together define the rule.
- 46. B** — Sum the values:  $4 + 8 + 6 + 10 + 12 = 40$ . Divide by the number of values:  $40 \div 5 = 8$ . The mean represents the total spread evenly across all values.
- 47. C** — The mode is the value that appears most often. In this data set, 5 appears three times — more than any other value — making it the mode.
- 48. A** — Range equals largest value minus smallest value:  $23 - 8 = 15$ . Range measures the spread between extremes and is one of the simplest measures of variation.
- 49. B** — A six-sided die has three even numbers (2, 4, 6) out of six total outcomes. Probability =  $3/6 = 1/2$ , meaning rolling even is equally likely as rolling odd.
- 50. D** — The circle graph shows 25% of students walk to school. Converting to a fraction,  $25\% = 25/100 = 1/4$ . Quarter of a circle visually corresponds to 25%.
- 51. C** — Doubling the recipe to make 24 muffins requires double the sugar:  $3/4 \times 2 = 6/4 = 1 \frac{1}{2}$  cups. Scaling recipes is a real-world application of fraction multiplication.
- 52. A** — Find a common denominator. The LCM of 3 and 6 is 6, so  $1/3 = 2/6$ . Then  $2/6 + 1/6 = 3/6$ , which simplifies to  $1/2$ .
- 53. B** — Distance = speed  $\times$  time. Convert 2 hours 30 minutes to 2.5 hours, then multiply:  $60 \times 2.5 = 150$  km. Unit consistency (hours matching speed in km/h) is essential.
- 54. D** — The distributive property requires multiplying the outside factor by each term inside the brackets:  $4(x + 3) = 4 \cdot x + 4 \cdot 3 = 4x + 12$ . The distributive property is one of the most-used algebra tools.
- 55. A** — Add 6 to both sides:  $5n = 25$ . Divide both sides by 5:  $n = 5$ . Two-step equations are solved by undoing operations in reverse order.
- 56. C** — The condition tests whether 17 is divisible by 2. Since 17 is odd, the IF condition is false, so the ELSE branch runs and the code displays "ODD."
- 57. B** — The common difference is 4, and the first term is 2, giving the rule  $4n - 2$ . For the 12th term:  $4(12) - 2 = 48 - 2 = 46$ . Using the algebraic rule jumps directly to any term.
- 58. D** — A square has four equal sides, so perimeter =  $4 \times \text{side} = 4 \times 7 = 28$  cm. The perimeter formula for a square is one of the most familiar measurement rules.
- 59. A** — Area of a rectangle = length  $\times$  width =  $9 \times 4 = 36$  m<sup>2</sup>. The unit is squared because area always measures two-dimensional coverage.

- 60. C** — A triangular prism has 9 edges: 3 around the top triangle, 3 around the bottom triangle, and 3 vertical edges connecting matching vertices. The pattern always equals 3 times the number of sides of the base polygon for a prism.
- 61. B** — Translate  $(-3, 4)$  by 5 right and 2 down: new  $x = -3 + 5 = 2$ , new  $y = 4 - 2 = 2$ . The translated point is  $(2, 2)$ . Translations add to the x-coordinate for "right" and subtract from y for "down."
- 62. D** — Complementary angles add to  $90^\circ$ . The complement of  $38^\circ$  is  $90^\circ - 38^\circ = 52^\circ$ . Distinguishing complementary ( $90^\circ$ ) from supplementary ( $180^\circ$ ) is essential for angle problems.
- 63. A** — A translation slides a shape to a new position without rotating, reflecting, or changing its size. It preserves orientation, while reflection flips it, rotation turns it, and resizing changes dimensions.
- 64. C** — Since  $1 \text{ km} = 1,000 \text{ m}$ , multiply:  $4.2 \times 1,000 = 4,200 \text{ m}$ . Converting from a larger unit to a smaller unit requires multiplication.
- 65. D** — Reflection across the y-axis keeps the y-coordinate unchanged and reverses the sign of the x-coordinate:  $(x, y) \rightarrow (-x, y)$ . So  $(2, 5)$  becomes  $(-2, 5)$ .
- 66. D** — Calculate each monthly difference: January = 1, February = 4, March = 2, April = 6. The greatest difference, 6 books, occurs in April when Aliya read 10 and Diego read 4.
- 67. A** — Numbers greater than 5 on the spinner are 6, 7, and 8 — that is 3 favourable outcomes out of 8 total. The probability is  $3/8$ .
- 68. C** — Total trail mix =  $2 + 1 + 1 = 4$  cups. Peanuts to total =  $2:4$ , which simplifies by dividing both numbers by 2 to give  $1:2$ .
- 69. D** — Total needed  $\div$  weekly savings =  $\$52 \div \$4 = 13$  weeks. Division solves "how many groups of x fit in y" problems.
- 70. B** — Add the frequencies across all intervals:  $3 + 6 + 8 + 5 + 3 = 25$  students. The total in a histogram equals the sum of the bar heights when each bar represents a frequency count.
- 71. D** — Simple interest = principal  $\times$  rate  $\times$  time =  $\$300 \times 0.03 \times 2 = \$18$ . With simple interest, the earned amount is proportional to both the rate and the number of years.
- 72. A** — Credit cards charge high interest (often 19–22% per year) on unpaid balances, and that interest compounds, allowing debt to grow rapidly. The other options misrepresent credit card features — credit cards do offer fraud protection, work online, and are widely accepted.
- 73. C** — Monthly amount = total goal  $\div$  months =  $\$480 \div 12 = \$40$  per month. Breaking a savings goal into equal periodic deposits is a fundamental financial planning step.
- 74. B** — Borrowing means receiving money or resources that must be returned later, usually with interest as compensation to the lender. The other options describe donating (A), trading (C), and saving (D).

**75. D** — At a rate of 7 L per 100 km, the unit rate is 0.07 L per km. For 350 km:  $350 \times 0.07 = 24.5$  L.  
Unit-rate problems multiply the rate by the new total quantity.