

# SIMULATION EXAM 10 (75 QUESTIONS)

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## SESSION A: READING — NARRATIVE TEXT

Read the story below. Then answer questions 1 to 12.

### The Goalie

Sumi had played soccer for two years, but only on defence. She liked the way you could see the whole field from the back. She liked that she could call out to her teammates and tell them where the open spaces were. She did not like being in net.

But on the morning of the Tuesday game against the Greenwoods, their regular goalie, Priya, came to the change room with a runny nose, a hoarse voice, and the news that her mother had told her she could not play.

"Sumi," said Coach Park. "You're up."

Sumi stared at him. The other girls were already pulling on their jerseys. Priya, who was sitting on the bench wrapped in a thick sweater, gave Sumi a small smile and a thumbs up.

"I don't know how," Sumi said.

"You know enough," said Coach Park. "Just remember the basics. Stay big. Watch the ball. Trust your defence."

Sumi pulled on the bright yellow goalie shirt over her own. It was too long in the arms. She tied her hair back, took the big padded gloves Priya handed her, and walked out onto the field with her stomach turning over and over.

For the first ten minutes of the game, Sumi did not have to do anything. The ball stayed at the other end of the field. She bounced on her toes and watched. She tried to remember what Priya did. Stay big. Watch the ball. Trust your defence.

Then the Greenwoods broke through.

Their striker — a tall girl in a red headband — got the ball just inside Sumi's half of the field. The defenders chased her. Sumi froze for a moment, then remembered. She stepped forward, made herself wide, and shouted, "I've got it!" Her own voice surprised her.

The striker shot.

Sumi did not so much catch the ball as fall on it. She landed on her side, hands wrapped around it, and the breath went out of her in a quick "Oof." But she had it. The ball was hers. She held it against her chest while the other girls jogged back into position.

The rest of the game was a blur of small moments. She caught two more easy shots and let one go past — a low ball that bounced off her hand and rolled in. When the Greenwoods scored, Sumi felt the heat rise up into her face. She wanted to look at her shoes. Instead she stood up straight and clapped twice — the way Priya always did after a goal against them — and called, "Reset, reset, let's go."

The final score was 2–1 for Sumi's team. Two goals scored. One goal allowed.

After the game, Priya came over and bumped fists with her through the chain-link fence.

"Not bad," Priya said, "for your first time in net."

Sumi pulled off the yellow shirt and felt the cool air on her arms. Her shoulder hurt where she had landed. Her hands were tingling from the catches.

She did not love being in net.

But she had done it. And she had not let her team down.

1. What position has Sumi been playing for the past two years?

- A. Defence
- B. Goalie
- C. Forward
- D. Midfielder

2. Why is Priya unable to play in Tuesday's game?

- A. She had a soccer practice scheduled at the same time at another field
- B. She had hurt her ankle during practice the day before the game
- C. She has a runny nose and a hoarse voice, and her mother said no
- D. She had a family event that her parents had told her not to miss

3. What does Coach Park tell Sumi to remember about being in goal?

- A. Watch the corners and never let the ball roll between your hands
- B. Use both feet and never rely on your hands to make the saves
- C. Stand still in the middle of the net and let the defenders handle it
- D. Stay big, watch the ball, and trust your defence

4. What does Sumi pull on over her own clothes before going out to play?

- A. A long-sleeved blue sweater that had belonged to her mother
- B. The bright yellow goalie shirt that Priya hands to her
- C. A red jersey that all the other defenders are also wearing
- D. A heavy padded vest that Coach Park hands to her at the gate

5. For how long at the START of the game did Sumi have nothing to do?

- A. About ten minutes
- B. About thirty seconds
- C. About thirty minutes
- D. The entire first half

6. What is the striker on the Greenwoods team wearing?

- A. A bright orange jersey with white numbers and her player name
- B. A blue jersey with matching blue socks that come up to her knees
- C. A red headband
- D. A green sweater with the team's logo across the front of it

7. How does Sumi stop the FIRST shot of the game?

- A. She catches the ball cleanly in her gloves and holds it tight to her chest
- B. She falls on the ball, landing on her side with her hands around it
- C. She kicks the ball away with her left foot and it goes out of bounds
- D. She blocks it with her head, which makes her dizzy for a few seconds

8. How does Sumi react when the Greenwoods score a goal against her team?

- A. She runs to the bench and asks the coach to take her out of the game
- B. She points at the defenders and tells them they should have stopped it
- C. She sits down on the grass and refuses to play any more of the game
- D. She stands up straight, claps twice, and calls "Reset, reset, let's go"

9. What was the FINAL score of the game?

- A. 2–1 for Sumi's team
- B. 1–1, a tie game between the two teams
- C. 3–2 for the Greenwoods team
- D. 2–0 for Sumi's team

10. What does the phrase "a blur of small moments" MOST LIKELY mean in the passage?

- A. A series of events that Sumi can recall in perfect detail later that day
- B. A long, slow period in which Sumi watched everything very carefully
- C. A quick series of events that happened too fast to fully remember
- D. A break in the game when Sumi had nothing important to do at all

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

- A. Players should refuse to take on new positions that they have not practised
- B. Stepping into an unfamiliar role can be done well even without loving it
- C. Goalies always need to be the tallest player on a soccer team to be effective
- D. Coaches should never ask defenders to play other positions during a real game



## **SESSION B: READING — INFORMATIONAL TEXT**

Read the article below. Then answer questions 13 to 18.

### **What Are Comets?**

For thousands of years, people who looked up at the night sky have sometimes seen a strange sight: a bright object with a long, glowing tail stretched across the dark. These visitors come and go, and ancient cultures often thought of them as warnings or signs. Today we know that they are something even stranger and more wonderful — they are comets, and they are some of the oldest objects in our solar system.

A comet is basically a giant ball of ice, dust, and frozen gas. Some scientists like to call them "dirty snowballs." Most comets are only a few kilometres across, which makes them tiny compared to planets. But when one passes close to the Sun, it can become one of the most spectacular sights in the sky.

The solid centre of a comet is called the nucleus. When the comet is far from the Sun, the nucleus is frozen solid and very dark. But as the comet travels closer to the Sun, the heat causes its ice to turn directly into gas — a process called sublimation. The gas and dust escape into space and form a glowing cloud around the nucleus called the coma. The coma can be thousands of kilometres wide.

Comets are best known for their long tails. As the Sun's energy pushes on the comet's gas and dust, it sweeps them out behind it into a long bright streak. Most comets actually have two tails: a curving tail made of dust, and a straighter, bluer tail made of gas. These tails always point away from the Sun, no matter which direction the comet is travelling.

Comets follow long, stretched-out paths around the Sun called orbits. Some come back every few decades. The most famous of these is Halley's Comet, which returns to the inner solar system about every 76 years. The last time it was visible from Earth was in 1986. The next time will be in 2061.

Other comets travel on much longer orbits and may take thousands of years to circle the Sun once. A few are seen only once and never return.

Why do scientists care so much about comets? Because they are leftovers from the very early solar system. The ice and dust in a comet have been frozen for billions of years, almost unchanged since the planets first formed. By studying comets, scientists can learn what the early solar system was made of, and even how water and certain chemicals may have arrived on the young Earth.

The next time you hear that a bright comet is visible, look up. You will be seeing an ancient traveller — one that has been on its long, slow journey for far longer than people have been on Earth.

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

- A. Halley's Comet is the most famous comet that humans have ever seen
- B. The Sun's energy pushes the gas and dust of comets into long tails
- C. Comets follow long orbits and may take many years to circle the Sun once
- D. Comets are ancient balls of ice, dust, and gas that travel around the Sun

14. According to the passage, what is a comet MOSTLY made of?

- A. Ice, dust, and frozen gas
- B. Solid rock and hot melted metal
- C. Burning gases that glow red in the Sun's heat
- D. Tiny pieces of rock that have broken off from planets

15. According to the passage, what is the COMA of a comet?

- A. The solid, frozen centre of a comet's nucleus far from the Sun
- B. The two tails that stretch behind a comet as it passes the Sun
- C. The glowing cloud of gas and dust that forms around the nucleus
- D. The long, stretched-out path that a comet follows around the Sun

16. In which direction do a comet's tails ALWAYS point?

- A. Toward the Sun, drawn by the Sun's strong gravity pulling on them
- B. Away from the Sun, pushed back by the Sun's energy
- C. Toward Earth, so that we can see them clearly from our planet
- D. Toward whichever direction the comet itself is travelling at the time

17. According to the passage, when will Halley's Comet next be visible from Earth?

- A. In 2026, about forty years after its last appearance from Earth
- B. In 1986, about seventy-six years after its previous appearance
- C. In 2030, sometime later this current decade on planet Earth
- D. In 2061, about seventy-five years after its last appearance

18. Explain why scientists study comets. Use TWO specific reasons from the passage to support your answer.

(Write your response on the lines provided. Use specific details from the passage.)

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D. My favourite Book is the Bridge to Terabithia by Katherine Paterson

21. Which sentence shows CORRECT pronoun-antecedent agreement?

- A. Every student should bring their lunches to the field trip on Friday
- B. Each player on the team must bring his or her own water bottle
- C. Each of the boys remembered to bring their homework to school today
- D. Neither of the girls could find their own jacket after class ended today

22. Which sentence shows CORRECT parallel structure?

- A. Mia likes swimming, reading, and to play soccer with her friends each weekend
- B. Mia likes to swim, reading, and play soccer with her friends each weekend
- C. Mia likes swimming, to read, and playing soccer with her friends each Saturday
- D. Mia likes swimming, reading, and playing soccer with her friends each Saturday

23. Which sentence uses the CORRECT plural noun?

- A. The two deers crossed the road at sunset along the edge of the field
- B. The two deer crossed the road at sunset along the edge of the field
- C. The two deeres crossed the road at sunset along the edge of the field
- D. The two deer's crossed the road at sunset along the edge of the field

24. Which sentence uses a comma CORRECTLY in a compound sentence?

- A. Maya bought a new bike and she rode it to the park later that afternoon
- B. Maya bought a new bike, and rode it to the park later that afternoon
- C. Maya, bought a new bike and she rode it to the park later that afternoon

D. Maya bought a new bike, and she rode it to the park later that afternoon

25. Which sentence uses "good" or "well" CORRECTLY?

- A. She sings well in the school choir and performs at every concert
- B. She sings good in the school choir and performs at every concert
- C. She does her homework very good every single night after dinner
- D. She did good on her math test even though she was sick that day

26. In the sentence "The soup tasted delicious tonight," the word "delicious" functions as which of the following?

- A. An adverb modifying the verb "tasted"
- B. A direct object of the verb "tasted"
- C. A subject complement that renames the soup
- D. A predicate adjective describing the soup

27. Which group of words is an INDEPENDENT clause?

- A. Walking quickly down the sidewalk to meet her friends at the park
- B. Because the bell finally rang at the end of the long math class
- C. Although Sumi did not love playing the goalie position at first
- D. The puppy chewed the new red collar that his owner had bought

28. Which sentence shows CORRECT subject-verb agreement with an indefinite pronoun?

- A. Each of the students have finished their assignment for the day today
- B. Everyone in the class enjoys the new books that arrived last week
- C. Everybody were asked to bring a snack to share at the end of the day

D. Several of the books on the top shelf is missing the cover and title page

29. Which sentence uses CORRECT subject-verb agreement in a "there is/are" construction?

- A. There is many books on the table in the library every single day
- B. There was three students waiting in the office this morning before class
- C. There were a long line at the cafeteria during lunch yesterday afternoon
- D. There are several questions on the math test that I did not finish

30. Which sentence is an IMPERATIVE sentence?

- A. The teacher asked the students to please be quiet during the test today
- B. Please be quiet during the test today
- C. Will you please be quiet during the test today?
- D. What a noisy room this is during a test today!

31. Think of a goal you would like to achieve in the next year. Describe the goal and explain at least two specific steps you will take to work toward it.

(Plan your writing. Write a clear, well-organized response using specific details and examples.)

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- B. 6 hundredths
- C. 6 tenths
- D. 6 thousandths

33. What is  $36 \times 24$ ?

- A. 720
- B. 824
- C. 944
- D. 864

34. What is the GREATEST common factor of 12 and 18?

- A. 2
- B. 3
- C. 6
- D. 36

35. What is  $\frac{2}{3} \times \frac{3}{4}$ ?

- A.  $\frac{1}{2}$
- B.  $\frac{5}{12}$
- C.  $\frac{6}{7}$
- D.  $\frac{5}{7}$

36. What is  $0.6 \times 0.5$ ?

- A. 3

- B. 0.3
- C. 0.03
- D. 30

37. What is the value of  $(5 + 3) \times 2$ ?

- A. 11
- B. 13
- C. 16
- D. 30

38. What is  $6,000 - 2,485$ ?

- A. 3,515
- B. 4,515
- C. 3,615
- D. 3,485

39. Solve for  $n$  in the equation  $n - 12 = 8$ .

- A. 4
- B. 96
- C.  $-4$
- D. 20

40. What is the value of  $3a + 4$  when  $a = 7$ ?

- A. 14

- B. 25
- C. 21
- D. 28

41. Look at this pattern: 5, 12, 19, 26, 33, ...

What is the NEXT number in the pattern?

- A. 40
- B. 41
- C. 35
- D. 42

42. Look at the table of values below.

n	y
1	6
2	11
3	16
4	21

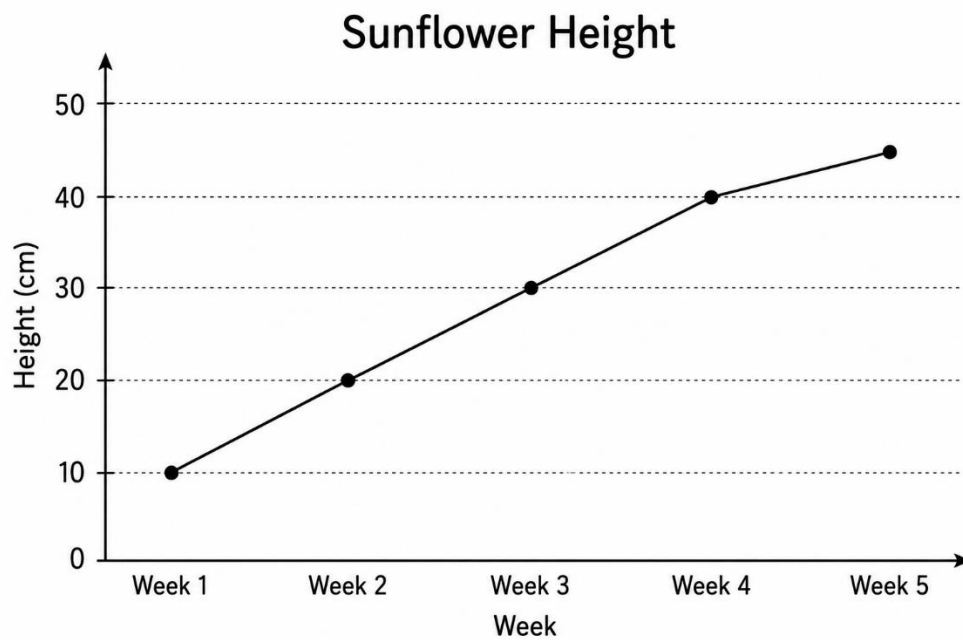
Which equation shows the relationship between n and y?

- A.  $y = 6n$
- B.  $y = n + 5$
- C.  $y = 5n + 1$
- D.  $y = 4n + 2$

43. What is the MODE of this data set: 3, 7, 4, 9, 2, 6?

- A. 4
- B. 6
- C. 5
- D. None — there is no mode

44. Look at the line graph below showing the height of a sunflower over five weeks.



By how much did the sunflower grow between Week 3 and Week 4?

- A. 10 cm
- B. 5 cm
- C. 30 cm
- D. 40 cm

45. A spinner has 8 equal sections: 4 red, 2 blue, 1 green, and 1 yellow. What is the probability of landing on BLUE?

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

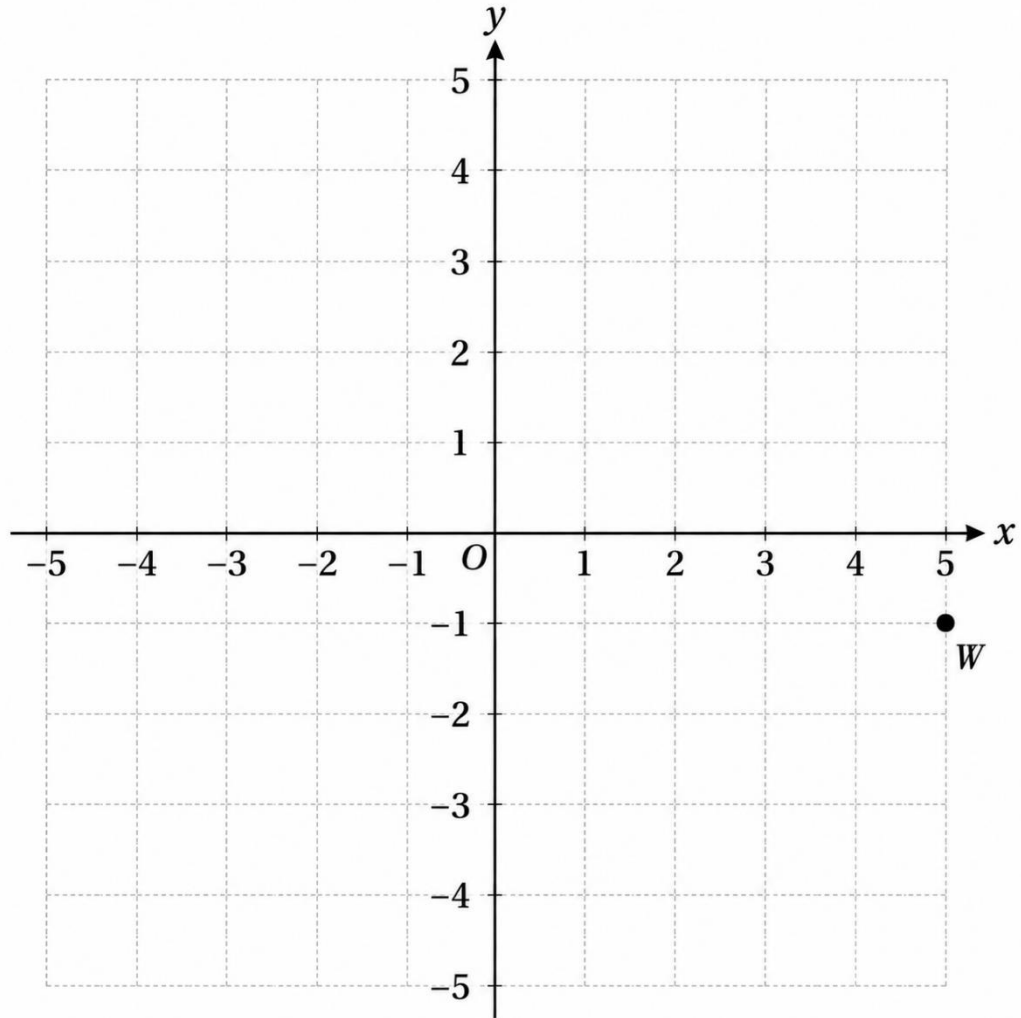
46. Two complementary angles measure  $45^\circ$  and what?

- A.  $135^\circ$
- B.  $90^\circ$
- C.  $145^\circ$
- D.  $45^\circ$

47. A cube has how many EDGES?

- A. 6
- B. 8
- C. 12
- D. 24

48. Look at the coordinate plane below.



What are the coordinates of point W?

- A. (5, -1)
- B. (-1, 5)
- C. (-5, 1)
- D. (1, -5)

49. A square has a side length of 8 cm. What is its AREA?

- A. 32 cm<sup>2</sup>
- B. 64 cm<sup>2</sup>

C.  $16 \text{ cm}^2$

D.  $24 \text{ cm}^2$

50. Maya saves \$5 every week. How much will she have saved after 6 weeks?

A. \$11

B. \$35

C. \$30

D. \$25

**SESSION D: MATHEMATICS (continued)**

51. What is  $728 \div 8$ ?

A. 91

B. 81

C. 92

D. 89

52. What is  $2 \frac{1}{4} + 3 \frac{1}{4}$ ?

A.  $5 \frac{2}{8}$

B.  $6 \frac{1}{2}$

C.  $5 \frac{1}{8}$

D.  $5 \frac{1}{2}$

53. What is  $12.5 - 6.78$ ?

- A. 6.28
- B. 5.72
- C. 6.72
- D. 5.28

54. What is  $250 \times 40$ ?

- A. 1,000
- B. 10,500
- C. 10,000
- D. 100,000

55. Which fraction is EQUIVALENT to the decimal 0.5?

- A.  $\frac{1}{2}$
- B.  $\frac{1}{5}$
- C.  $\frac{5}{100}$
- D.  $\frac{1}{10}$

56. What is 50% of 84?

- A. 21
- B. 42
- C. 84
- D. 168

57. A box of 24 cookies costs \$6.00. How much does ONE cookie cost?

- A. \$4.00
- B. \$2.40
- C. \$0.50
- D. \$0.25

58. Solve for  $x$  in the equation  $3x = 21$ .

- A. 18
- B. 24
- C. 7
- D. 63

59. Which expression represents "a number  $n$  divided by 4"?

- A.  $4n$
- B.  $n + 4$
- C.  $n - 4$
- D.  $n \div 4$

60. What is the value of  $2(b + 3)$  when  $b = 5$ ?

- A. 16
- B. 13
- C. 28
- D. 10

61. Look at this pattern: 64, 32, 16, 8, \_\_\_\_ .

What is the NEXT term in the pattern?

- A. 6
- B. 5
- C. 4
- D. 2

62. Look at the pseudocode below:

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SET product = 1
FOR each number from 2 to 4:
    Multiply product by the number
Display product
```

What is the FINAL value of product?

- A. 8
- B. 24
- C. 12
- D. 16

63. What is the RANGE of these temperatures: 5°C, 12°C, -3°C, 8°C, 15°C?

- A. 10°C
- B. 12°C
- C. 15°C

D.  $18^{\circ}\text{C}$

64. Find the MEDIAN of these numbers: 3, 9, 5, 11, 7, 1.

A. 5

B. 7

C. 6

D. 8

65. Find the MEAN of these numbers: 25, 30, 35, 40, 20.

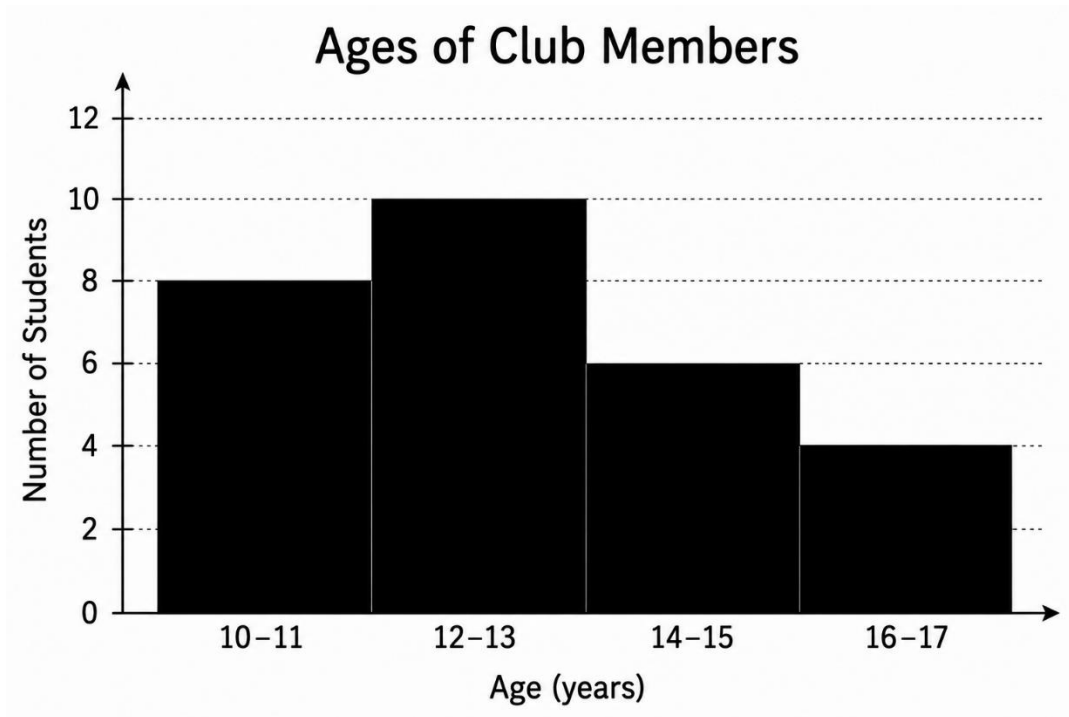
A. 30

B. 35

C. 25

D. 32

66. Look at the histogram below showing the number of students in different age groups at a community club.



How many students are in the 12–13 age group?

- A. 8
- B. 10
- C. 6
- D. 4

67. A bag contains 5 red marbles and 5 blue marbles. What is the probability of drawing a RED marble at random?

- A.  $1/10$
- B.  $5/15$
- C.  $1/4$
- D.  $1/2$

68. A rectangular prism has dimensions of 4 cm by 5 cm by 6 cm. What is its VOLUME?

- A.  $120 \text{ cm}^3$
- B.  $60 \text{ cm}^3$
- C.  $30 \text{ cm}^3$
- D.  $80 \text{ cm}^3$

69. A right triangle has one angle measuring  $30^\circ$ . What is the measure of the THIRD angle?

- A.  $90^\circ$
- B.  $60^\circ$
- C.  $30^\circ$
- D.  $120^\circ$

70. A point is located at  $(-1, 4)$ . It is translated 3 units RIGHT and 6 units DOWN. What are the coordinates of the new point?

- A.  $(2, 10)$
- B.  $(-4, -2)$
- C.  $(2, -2)$
- D.  $(-4, 10)$

71. How many millilitres are in 2.5 litres?

- A. 25 mL
- B. 250 mL
- C. 25,000 mL
- D. 2,500 mL

72. A parallelogram has a base of 12 cm and a height of 5 cm. What is its AREA?

- A.  $17 \text{ cm}^2$
- B.  $34 \text{ cm}^2$
- C.  $60 \text{ cm}^2$
- D.  $30 \text{ cm}^2$

73. Aria received \$15.00 for her birthday. She spent \$8.50 on a book. How much money does she have LEFT?

- A. \$6.50
- B. \$7.50
- C. \$7.00
- D. \$23.50

74. A \$25 game is on sale for 40% off. How much is the DISCOUNT?

- A. \$5
- B. \$10
- C. \$15
- D. \$20

75. What does it mean to EARN interest on a savings account?

- A. The bank gives you a small free gift every time you make a deposit at any branch
- B. The bank reduces the amount of money you keep in your account each month
- C. The bank charges you a small fee for keeping your money in the account
- D. The bank adds extra money to your account based on what you have saved

## ANSWER KEY & DETAILED EXPLANATIONS — SIMULATION EXAM 10

- 1. A** — The opening line states directly: "Sumi had played soccer for two years, but only on defence." Defence is the position she has played consistently for the past two years.
- 2. C** — The passage describes Priya arriving with "a runny nose, a hoarse voice, and the news that her mother had told her she could not play." All three details match option C.
- 3. D** — Coach Park says directly: "Just remember the basics. Stay big. Watch the ball. Trust your defence." All three pieces of advice appear together as the coach's words.
- 4. B** — The passage states: "Sumi pulled on the bright yellow goalie shirt over her own." The yellow goalie shirt is the specific item put on over her regular clothes.
- 5. A** — The passage states: "For the first ten minutes of the game, Sumi did not have to do anything." Ten minutes is the explicit duration of the quiet start.
- 6. C** — The Greenwoods striker is described as "a tall girl in a red headband." The red headband is the specific clothing detail given.
- 7. B** — The passage states: "Sumi did not so much catch the ball as fall on it. She landed on her side, hands wrapped around it." Falling on the ball with her hands around it is how she stops the first shot.
- 8. D** — After the goal, the passage states: "she stood up straight and clapped twice — the way Priya always did after a goal against them — and called, 'Reset, reset, let's go.'" All three actions appear together in option D.
- 9. A** — The passage states directly: "The final score was 2–1 for Sumi's team." Two goals scored and one allowed gives the 2–1 win.
- 10. C** — In context, the rest of the game becomes "a blur of small moments" — meaning quick, indistinct events that pass too quickly to recall in full detail. A blur in everyday usage describes things moving or happening too fast to see clearly.
- 11. B** — Sumi steps into the goalie role she does not love, makes mistakes and saves, and "had not let her team down." The story celebrates doing well in an unfamiliar role even without loving it, which matches option B.
- 12. OPEN-RESPONSE** — A strong Code 40 response identifies Sumi's shift from nervousness to focus: her stomach "turning over and over" at the start; freezing then remembering ("Stay big. Watch the ball. Trust your defence."); the surprising sound of her own voice shouting "I've got it!"; standing tall after the goal against her; and bumping fists with Priya at the end. Code 40 responses cite specific moments and explain how each shows the change.

**13. D** — The opening paragraphs introduce comets as ancient visitors that travel around the Sun, and the body of the passage describes what they are made of and how they orbit. Option D captures both the composition (ice, dust, gas) and the central activity (travel around the Sun).

**14. A** — The passage states: "A comet is basically a giant ball of ice, dust, and frozen gas." Some scientists, the passage adds, like to call them "dirty snowballs."

**15. C** — The passage defines the term directly: "The gas and dust escape into space and form a glowing cloud around the nucleus called the coma." The coma is the cloud, not the nucleus, tail, or orbit.

**16. B** — The passage states: "These tails always point away from the Sun, no matter which direction the comet is travelling." The Sun's energy pushes the gas and dust away from the comet's nucleus.

**17. D** — The passage states: "The last time it was visible from Earth was in 1986. The next time will be in 2061." The result,  $2061 - 1986 = 75$  years between visible appearances, matches option D.

**18. OPEN-RESPONSE** — A strong Code 40 response cites at least two reasons scientists study comets, drawn from the final paragraphs: comets are leftovers from the very early solar system; their ice and dust have been almost unchanged for billions of years; studying them reveals what the early solar system was made of; and they may show how water and certain chemicals first arrived on the young Earth. Code 40 responses cite specific details and explain how each makes comets valuable.

**19. C** — A misplaced modifier is a descriptive phrase that wrongly seems to describe the closest noun. Option C correctly places "covered in chocolate sauce" right after "sundae," so the phrase clearly describes the dessert. Options A and B make it sound as if Eli is covered in chocolate sauce, and D scrambles the sentence.

**20. A** — In title case, the first and last words and all major words (nouns, verbs, adjectives) are capitalized, while short prepositions like "to" are lowercased. Option A correctly capitalizes "The Bridge to Terabithia," with "to" left lowercase as a short preposition.

**21. B** — A pronoun must agree in number with its antecedent. "Each player" is singular, and "his or her" is also singular, so they match correctly in option B. The other options pair singular subjects (Every, Each, Neither) with the plural "their," which breaks traditional agreement.

**22. D** — Parallel structure means using the same grammatical form for items in a list. Option D uses three gerunds (swimming, reading, playing), keeping the structure consistent. The other options mix gerunds with infinitives (to swim, to read), breaking parallelism.

**23. B** — "Deer" is an irregular noun whose plural form is the same as its singular form. Option B correctly uses "two deer" for the plural. The forms "deers," "deeres," and "deer's" are not standard English.

**24. D** — A compound sentence joins two independent clauses with a comma plus a coordinating conjunction. Option D uses ", and" correctly between "Maya bought a new bike" and "she rode it to the park." Option A omits the comma, B has a compound predicate (no comma needed), and C misplaces the comma.

**25. A** — "Well" is the adverb form used to modify verbs, while "good" is the adjective form. Option A correctly uses "well" to modify "sings." The other options use "good" as an adverb, which is non-standard in formal English.

**26. D** — A predicate adjective follows a linking verb and describes the subject. In "The soup tasted delicious," the linking verb "tasted" connects the subject "soup" with the adjective "delicious," which describes it. Adjectives describe, while nouns rename (which would be a predicate nominative), so D is the most precise label.

**27. D** — An independent clause has a subject and a verb and can stand alone as a complete sentence. Option D, "The puppy chewed the new red collar that his owner had bought," has the subject "puppy" and verb "chewed" and expresses a complete thought. Options A, B, and C are phrases or dependent clauses that cannot stand alone.

**28. B** — Indefinite pronouns like "everyone," "everybody," and "each" are singular and take singular verbs. Option B correctly pairs "Everyone" with the singular verb "enjoys." The other options pair singular indefinite pronouns with plural verbs, breaking agreement.

**29. D** — In "there is/are" constructions, the verb agrees with the subject that follows. Option D pairs "are" with the plural subject "several questions," which agrees correctly. The other options pair singular verbs with plural subjects, or plural verbs with singular subjects.

**30. B** — An imperative sentence gives a command or makes a request, often with the subject "you" understood. Option B, "Please be quiet during the test today," is a direct request without a stated subject. Option A is declarative, C is interrogative, and D is exclamatory.

**31. OPEN-RESPONSE** — A strong Code 30 or 40 response names one specific goal, describes it clearly, and lists at least two concrete steps for working toward it. The strongest responses move beyond vague statements ("I want to do better in school") to specific goals ("I want to improve my reading speed to 200 words per minute") with concrete steps and timelines.

**32. B** — In 4.367, the digit 6 sits in the hundredths place (two places to the right of the decimal point). Its value is 6 hundredths, or 0.06. Place value decreases by a factor of ten with each position to the right of the decimal.

**33. D** — Split one factor to use easier numbers:  $36 \times 20 = 720$  and  $36 \times 4 = 144$ . Add the partial products:  $720 + 144 = 864$ . Splitting one factor into tens and ones is a reliable mental-math approach.

**34. C** — List the factors of each number: 12 has {1, 2, 3, 4, 6, 12} and 18 has {1, 2, 3, 6, 9, 18}. The greatest factor shared by both lists is 6. The greatest common factor is the largest number that divides into both values without a remainder.

**35. A** — Multiply numerators together and denominators together:  $(2 \times 3) \div (3 \times 4) = 6/12$ . Simplify by dividing both by 6:  $6/12 = 1/2$ . Multiplying fractions does not require a common denominator.

**36. B** — Multiply as if without decimals:  $6 \times 5 = 30$ . Count decimal places in the factors: 0.6 has one place and 0.5 has one place, so the answer has two decimal places: 0.30, which equals 0.3.

**37. C** — Order of operations requires the brackets first:  $5 + 3 = 8$ . Then multiply:  $8 \times 2 = 16$ . Brackets always take priority over other operations.

**38. A** — Subtract with borrowing:  $6,000 - 2,485 = 3,515$ . As a check, add the answer back to the subtracted amount:  $3,515 + 2,485 = 6,000$ .

**39. D** — To isolate  $n$ , add 12 to both sides:  $n = 8 + 12 = 20$ . The inverse operation undoes the subtraction to keep the equation balanced.

**40. B** — Substitute  $a = 7$  into  $3a + 4$ :  $3(7) + 4 = 21 + 4 = 25$ . Order of operations requires multiplication before addition.

**41. A** — The differences between consecutive terms are 7 each time:  $12 - 5 = 7$ ,  $19 - 12 = 7$ ,  $26 - 19 = 7$ ,  $33 - 26 = 7$ . Adding 7 to 33 gives 40 as the next term.

**42. C** — Test the equation  $y = 5n + 1$  against each row:  $5(1) + 1 = 6 \checkmark$ ,  $5(2) + 1 = 11 \checkmark$ ,  $5(3) + 1 = 16 \checkmark$ ,  $5(4) + 1 = 21 \checkmark$ . The equation matches every row of the table.

**43. D** — The mode is the value that appears most often in a data set. Each number in this set (3, 7, 4, 9, 2, 6) appears only once, so there is no value that occurs more often than any other. The conventional answer in such cases is "no mode."

**44. A** — Reading the line graph, Week 3 = 30 cm and Week 4 = 40 cm. The growth between these weeks is  $40 - 30 = 10$  cm. Growth between two points is found by subtracting the earlier value from the later value.

**45. B** — The spinner has 2 blue sections out of 8 equal sections in total. The probability of landing on blue is  $2/8$ . Probability of an event equals favourable outcomes divided by total outcomes.

**46. D** — Complementary angles sum to  $90^\circ$ . Subtract the known angle:  $90^\circ - 45^\circ = 45^\circ$ . When two complementary angles are equal, each must measure  $45^\circ$  because  $45 + 45 = 90$ .

**47. C** — A cube has 12 edges: 4 along the top face, 4 along the bottom face, and 4 connecting the top and bottom. Each edge is where two faces meet.

**48. A** — Point W sits 5 units to the right of the y-axis (so  $x = 5$ ) and 1 unit below the x-axis (so  $y = -1$ ), giving the coordinates  $(5, -1)$ . Coordinates are always written in the order  $(x, y)$ .

**49. B** — Area of a square = side  $\times$  side =  $8 \times 8 = 64 \text{ cm}^2$ . Because all four sides of a square are equal, the area formula simplifies to side squared.

**50. C** — Multiply the weekly amount by the number of weeks:  $\$5 \times 6 = \$30$ . Repeated saving over time uses multiplication to find the total.

**51. A** — Divide 728 by 8:  $8 \times 90 = 720$ , and  $728 - 720 = 8$ . Then  $8 \div 8 = 1$ , so the total quotient is  $90 + 1 = 91$ . As a check,  $8 \times 91 = 728$ .

**52. D** — Add whole numbers and fractions separately:  $2 + 3 = 5$  and  $1/4 + 1/4 = 2/4$ . Simplify  $2/4$  to  $1/2$ , giving  $5 \frac{1}{2}$  as the final answer.

**53. B** — Align the decimal points and subtract:  $12.50 - 6.78 = 5.72$ . Writing 12.5 as 12.50 makes the place-value columns line up cleanly for borrowing.

**54. C** — Multiply the non-zero digits and count the trailing zeros:  $25 \times 4 = 100$ , and the two factors together have 2 trailing zeros (one in 250, one in 40), giving 10,000. As a check,  $250 \times 40 = 250 \times 4 \times 10 = 1,000 \times 10 = 10,000$ .

**55. A** — The decimal 0.5 represents 5 tenths, or  $5/10$ , which simplifies to  $1/2$  when both numerator and denominator are divided by 5. A fraction in lowest terms shares no common factor greater than 1.

**56. B** — Fifty percent represents one-half, so 50% of 84 is  $84 \div 2 = 42$ . Splitting a number in half is the fastest way to find 50%.

**57. D** — Divide the total cost by the number of cookies:  $\$6.00 \div 24 = \$0.25$  per cookie. Unit cost problems use division to find the per-item price.

**58. C** — To isolate  $x$ , divide both sides by 3:  $x = 21 \div 3 = 7$ . The inverse operation undoes the multiplication while keeping the equation balanced.

**59. D** — "A number  $n$ " gives the variable  $n$ , and "divided by 4" means to divide by 4, written as  $n \div 4$ . The other options describe multiplication, addition, and subtraction operations.

**60. A** — Substitute  $b = 5$  into  $2(b + 3)$  and follow order of operations:  $2(5 + 3) = 2(8) = 16$ . The brackets require the addition inside to be done before the multiplication.

**61. C** — Each term in the pattern is divided by 2 to get the next:  $64 \div 2 = 32$ ,  $32 \div 2 = 16$ ,  $16 \div 2 = 8$ , and  $8 \div 2 = 4$ . The next term in the pattern is 4.

**62. B** — Trace through the loop, multiplying the running product by each number from 2 to 4:  $1 \times 2 = 2$ ,  $2 \times 3 = 6$ ,  $6 \times 4 = 24$ . The final displayed value is 24.

**63. D** — Range equals the largest value minus the smallest value. The largest temperature is  $15^{\circ}\text{C}$  and the smallest is  $-3^{\circ}\text{C}$ , so the range is  $15 - (-3) = 18^{\circ}\text{C}$ . Subtracting a negative is the same as adding a positive.

**64. C** — Arrange the numbers in order: 1, 3, 5, 7, 9, 11. For an even number of values, the median is the average of the two middle numbers:  $(5 + 7) \div 2 = 6$ .

**65. A** — Add the five values:  $25 + 30 + 35 + 40 + 20 = 150$ . Divide by the number of values:  $150 \div 5 = 30$ . The mean is the total divided by the count.

**66. B** — The bar for the 12–13 age group reaches 10 students on the y-axis. The other bars are at 8 (ages 10–11), 6 (ages 14–15), and 4 (ages 16–17).

**67. D** — Total marbles =  $5 + 5 = 10$ . Favourable outcomes (red) = 5, so the probability of drawing red =  $5/10$ , which simplifies to  $1/2$ . When half the items meet the condition, the probability is one-half.

**68. A** — Volume of a rectangular prism = length  $\times$  width  $\times$  height =  $4 \times 5 \times 6 = 120 \text{ cm}^3$ . The unit is cubed because volume measures three-dimensional space.

**69. B** — The interior angles of any triangle sum to  $180^{\circ}$ . In a right triangle, one angle is  $90^{\circ}$ . Subtract the two known angles:  $180^{\circ} - 90^{\circ} - 30^{\circ} = 60^{\circ}$ .

**70. C** — Translating 3 units right adds 3 to the x-coordinate; translating 6 units down subtracts 6 from the y-coordinate. Applied to  $(-1, 4)$ :  $(-1 + 3, 4 - 6) = (2, -2)$ .

**71. D** — Since 1 litre equals 1,000 millilitres, multiply by 1,000 to convert:  $2.5 \times 1,000 = 2,500$  mL. Moving from a larger unit to a smaller unit requires multiplication.

**72. C** — Area of a parallelogram = base  $\times$  height =  $12 \times 5 = 60 \text{ cm}^2$ . The formula uses the perpendicular height, not the slanted side length.

**73. A** — Subtract the cost from the starting amount:  $\$15.00 - \$8.50 = \$6.50$ . Aligning the decimal points keeps the dollar and cent columns properly aligned for subtraction.

**74. B** — A discount is a percent of the original price. Calculate 40% of  $\$25$ :  $0.40 \times \$25 = \$10$ . The discount is the amount taken off, not the final price paid.

**75. D** — When money is kept in a savings account, the bank pays interest as a small percent of the amount saved, adding extra money to the account over time. This is one of the main reasons people choose savings accounts over keeping cash at home, since the saved money grows on its own.