

SIMULATION EXAM 14 (75 QUESTIONS)

SESSION A: READING — NARRATIVE TEXT

Read the following selection and answer questions 1–12.

The Wrong Hallway

Ben had been to the Science Centre exactly once before, when he was eight. He remembered the dinosaur fossils and the soap-bubble room and not much else. So when his Grade 6 class arrived for their field trip, the building looked completely new to him.

Their teacher, Ms. Yamamoto, divided the class into groups of four and gave each group a folded paper map and a list of exhibits to find. Ben's group included Carlos, Aisha, and Jin. They started with the human body exhibit, then moved on to the weather room, and then the planets gallery. Everything was going smoothly until Ben stopped to read a sign about Jupiter.

When he looked up, his group was gone.

For a moment, Ben felt his stomach drop. The planets gallery was busy, with school groups and families moving in every direction. He turned in a slow circle, looking for Carlos's red baseball cap. He could not see it.

He could feel his heart beating fast. He took a breath and tried to think. They were supposed to go to the dinosaur hall next. He pulled out the paper map. Dinosaur hall was on Level 2, down the hallway past the gift shop. He could find it on his own.

He walked through the planets gallery and out into the main corridor. He turned right toward the gift shop. He kept walking. After a minute, the hallway opened into a large room he did not recognize at all. There were no dinosaurs here. There were only displays about old computers and telephones.

Ben stopped. THE TECHNOLOGY OF THE PAST, the sign said. He had taken a wrong turn somewhere.

For one bad second, Ben wanted to sit down on the floor and wait for someone to find him. But he knew that would not work. He took another breath and looked at the map. He had walked too far. The dinosaur hall was actually just past the gift shop, not past it twice.

He turned around. He walked back the way he had come, more slowly this time, paying attention to the signs at every doorway. He passed the gift shop. He passed a smaller sign that pointed left and said DINOSAUR HALL. He had missed that sign the first time.

When he walked into the dinosaur hall, Carlos, Aisha, and Jin were standing in front of the Tyrannosaurus skeleton. Ms. Yamamoto was standing with them, looking at her watch.

"Ben!" Carlos called. "We were about to come look for you!"

Ben slid the map back into his pocket. He did not say much about how he had found them. He just looked up at the enormous skull of the T-Rex and felt his heart slow back down to normal. Getting lost had not been the disaster he thought it would be. It had only been a wrong hallway.

1. When had Ben last been to the Science Centre BEFORE this trip?

- A. He had visited just one week before with his family
- B. He had been there several times during the past year
- C. Once, when he was eight years old
- D. Never — this field trip was his very first visit

2. Who is Ms. Yamamoto?

- A. Ben's classroom teacher who organized the field trip
- B. The principal of Ben's elementary school
- C. A guide who works at the Science Centre full-time
- D. Ben's mother, who came along on the field trip

3. Who was in Ben's group at the Science Centre?

- A. Aisha, Daniel, and Marcus
- B. Carlos, Marcus, and Priya
- C. Jin, Priya, and Sara
- D. Carlos, Aisha, and Jin

4. What was Ben reading when he became SEPARATED from his group?

- A. A sign about the Tyrannosaurus skeleton
- B. A sign about the planet Jupiter
- C. A map of the Science Centre exhibits
- D. A list of exhibits the class needed to find

5. How did Ben feel when he FIRST realized his group was gone?

- A. His stomach dropped and his heart began to beat fast
- B. He was relieved to have a moment to himself
- C. He felt angry that his group had abandoned him
- D. He thought the situation was funny and laughed

6. What was Ben's group supposed to visit NEXT after the planets gallery?

- A. The planets gallery near the front entrance
- B. The human body exhibit on Level 1
- C. The dinosaur hall on Level 2
- D. The weather room near the front lobby

7. Where did Ben end up after taking a wrong turn?

- A. In the gift shop, near the entrance
- B. In a room about old computers and telephones
- C. In the planets gallery, where he had started
- D. In the front lobby of the Science Centre

8. What did Ben want to do for a BRIEF moment when he realized he was lost?

- A. Run back to the entrance and find his mother
- B. Ask the nearest stranger for directions
- C. Use a phone to call Ms. Yamamoto
- D. Sit down on the floor and wait for someone to find him

9. What did Ben actually DO to find his group?

- A. He turned around, walked back, and watched the signs more carefully
- B. He kept walking forward until he stumbled into the dinosaur hall
- C. He asked a security guard to take him to the dinosaur hall
- D. He stayed in the technology room and waited for help

10. Who or what was Ben's group looking at when he FINALLY arrived?

- A. The skull of a Triceratops
- B. A wall of dinosaur footprints
- C. The Tyrannosaurus skeleton
- D. A diorama of dinosaurs in their habitat

11. What does Ben REALIZE at the end of the story?

- A. Field trips are too dangerous for students his age
- B. Getting lost had not been the disaster he had feared
- C. He should never have come on the field trip in the first place
- D. He needs to stay near Ms. Yamamoto at all times in the future

12. OPEN-RESPONSE

Describe how Ben SOLVED the problem of being lost in the Science Centre. Use at least TWO specific details from the story to support your answer.

For most of human history, people watched birds and wondered how they did it. How did something with a heartbeat and bones lift itself into the air and stay there? The answer turns out to involve a clever combination of shape, weight, and force.

The most important thing about a bird's wing is its shape. If you look at a wing from the side, the top surface is curved and the bottom is mostly flat. This shape is called an airfoil. As the bird moves forward, air has to travel over the curved top and under the flat bottom. The air over the top moves faster than the air below, and the faster-moving air pushes down less strongly. The result is more pressure pushing up from below than down from above. This upward push is called lift, and it is what holds the bird in the sky.

Lift alone is not enough. A bird also has to move forward, and for that it uses its powerful chest muscles to flap its wings up and down. The downward stroke pushes air backward, and the air pushes the bird forward. This forward push is called thrust. Together, lift and thrust let a bird climb, glide, turn, and slow down.

Birds also need to be light. Their bones are not solid like ours. They are hollow, with thin walls and small struts inside for strength. This hollow design keeps the bird's skeleton strong while making it surprisingly light. Even a large bird like a Canada goose has bones that weigh less than its feathers altogether.

Feathers do more than insulate. They cover the wings and tail in flat, overlapping shapes that can adjust direction as the bird flies. Larger feathers along the wing edge catch the air. Smaller feathers smooth out the airflow. The tail acts like a rudder, helping the bird steer in flight.

Not every bird flies, of course. Penguins use their flipper-like wings to swim, and ostriches run on long, powerful legs. But for the species that do take to the sky, the same basic combination is at work — an airfoil shape, strong flight muscles, light bones, and feathers shaped to do their work in the moving air. Flight may look magical, but it is really just very good engineering.

13. What is the MAIN IDEA of the passage?

- A. Birds are the only animals that can move through the air
- B. Different birds have different wing shapes for different purposes
- C. Bird flight depends on a combination of wing shape, muscles, and lightness
- D. Bird bones are hollow because birds spend so much time in the air

14. According to the passage, what is an AIRFOIL?

- A. A type of feather found only along the edge of a bird's wing
- B. The hollow chamber inside a bird's bones that makes them light
- C. The combination of thrust and lift that lets birds fly forward
- D. A wing shape that is curved on top and mostly flat on the bottom

15. According to the passage, what produces LIFT?

- A. Faster-moving air over the curved top of the wing
- B. Slower-moving air under the flat bottom of the wing
- C. The downward stroke of the bird's powerful wing flap
- D. The smooth shape of the feathers along the bird's wing tip

16. According to the passage, what produces THRUST?

- A. The forward push of air pressure against the bird's body
- B. The downward stroke of the wings pushing air backward
- C. The motion of the tail feathers steering the bird forward
- D. The position of the larger feathers along the leading edge

17. According to the passage, why are bird bones HOLLOW?

- A. So that they can store extra air for long flights
- B. To make the bird's heart and lungs easier to reach
- C. To keep the skeleton strong while making the bird lighter
- D. So that the bird's blood can flow more freely during flight

SESSION C: WRITING — CONVENTIONS & COMPOSITION

19. Which sentence uses CORRECT punctuation for dialogue?

- A. "I think it might rain today, said Marcus.
- B. "I think it might rain today said Marcus."
- C. I think it might rain today, "said Marcus".
- D. "I think it might rain today," said Marcus.

20. Which sentence is an EXCLAMATORY sentence?

- A. What a beautiful sunset we saw at the beach last night!
- B. The sunset at the beach was beautiful last night.
- C. Did you see the beautiful sunset at the beach last night?
- D. Please come outside and see the sunset before it disappears.

21. Which word in this sentence is a PRONOUN?

"She gave the book to her brother yesterday."

- A. Brother
- B. Book
- C. She
- D. Yesterday

22. Which sentence uses a COLON correctly?

- A. The grocery list included: apples, oranges, and milk.
- B. We need three things for the trip: a map, food, and water.
- C. After: lunch, we will go to the museum together.
- D. The teacher said: that we should bring our books tomorrow.

23. Which sentence uses a SEMICOLON correctly?

- A. I love to read; my brother prefers to watch movies.
- B. I love to read; and my brother prefers to watch movies.
- C. I love to read; movies, but my brother prefers them.
- D. I love to read books; and writing in my journal.

24. Which sentence is in the PAST tense?

- A. The students will arrive at school by 8:30 in the morning
- B. The students are arriving at school just in time for the bell
- C. The students arrive at school by 8:30 every single morning
- D. The students arrived at school just before the bell rang

25. Which sentence uses the word "your" CORRECTLY?

- A. Your going to enjoy the new movie at the cinema
- B. Your science project is the best one in the class
- C. I think your too tired to finish the homework tonight
- D. Your only seven years old and already reading novels

26. Which is the BEST way to combine these two sentences?

"The rain stopped. The children went outside to play."

- A. The rain stopped, the children went outside to play
- B. The rain stopped or the children went outside to play
- C. When the rain stopped, the children went outside to play
- D. The rain stopped because the children went outside to play

27. Which sentence has CORRECT punctuation for a question inside a quotation?

- A. He asked, where are we going on Saturday.
- B. He asked. "Where are we going on Saturday?"
- C. He asked "where are we going on Saturday".
- D. He asked, "Where are we going on Saturday?"

28. Which sentence uses HOMOPHONES correctly?

- A. They are going to the park to meet their friends after lunch
- B. They're are going to the park to meet there friends after lunch
- C. There are going to the park to meet they're friends after lunch
- D. Their are going to the park to meet there friends after lunch

29. Which sentence is the BEST example of DESCRIPTIVE language?

- A. The dog ran across the yard quickly during the storm
- B. The shaggy brown dog raced across the muddy yard, barking at the thunder
- C. The dog moved across the yard when there was a storm
- D. There was a dog that ran across the yard while it was storming

30. Which sentence is written in the IMPERATIVE mood (gives a command or instruction)?

- A. The students are listening to the morning announcements
- B. The students will listen to the announcements quietly
- C. Listen carefully to the announcements this morning
- D. The students always listen carefully to announcements

31. OPEN-RESPONSE — WRITING PROMPT

Think of a BOOK or MOVIE that taught you something important.

Describe the book or movie, explain WHAT it taught you, and tell HOW that lesson has affected the way you think or act. Use specific details to support your ideas.

Your writing should:

- Include a clear opening, middle, and closing
- Name the book or movie and briefly describe what it is about
- Identify ONE clear lesson you learned from it
- Explain how that lesson has changed your thinking or actions
- Use vivid, specific language
- Show correct spelling, grammar, and punctuation

- A. 2
- B. 2,000
- C. 20,000
- D. 200,000

33. What is 64×7 ?

- A. 448
- B. 428
- C. 458
- D. 468

34. Which fraction is already in SIMPLEST form?

- A. $\frac{4}{6}$
- B. $\frac{5}{7}$
- C. $\frac{6}{8}$
- D. $\frac{8}{10}$

35. Which decimal is EQUIVALENT to $\frac{3}{4}$?

- A. 0.34
- B. 0.43
- C. 0.75
- D. 0.45

36. Which of the following decimals is LEAST?

- A. 0.42
- B. 0.4
- C. 0.35
- D. 0.305

37. What is 20% of 150?

- A. 30
- B. 20
- C. 50
- D. 75

38. What is $5.6 + 4.85$?

- A. 9.45
- B. 10.55
- C. 10.45
- D. 9.91

39. What is $672 \div 8$?

- A. 86
- B. 76
- C. 96
- D. 84

40. Solve for p in the equation $2p = 18$.

- A. 9
- B. 16
- C. 36
- D. 8

41. What is the value of $7n - 5$ when $n = 4$?

- A. 28
- B. 23
- C. 33
- D. 30

42. Which expression represents "three times a number n , plus 8"?

- A. $3 + n \times 8$
- B. $3(n + 8)$
- C. $3n + 8$
- D. $n + 3 + 8$

43. What is the next term in this pattern: 2, 6, 18, 54, ___ ?

- A. 108
- B. 72
- C. 96
- D. 162

44. Look at the stem-and-leaf plot below showing math quiz scores in a Grade 6 class.

Test Scores

Stem (Tens)	Leaf (Ones)
5	2 5 7
6	0 1 3 8
7	0 2 4 5 9
8	1 3 6 7
9	0 2 4

Key: 6 | 3 means 63

How many students scored in the 70s on this quiz?

- A. 6
- B. 4
- C. 2
- D. 1

45. Find the MEAN of these numbers: 15, 12, 18, 20, 10.

- A. 18
- B. 12
- C. 15
- D. 20

46. A rectangle has a perimeter of 50 cm. If the length is 15 cm, what is the WIDTH?

A. 35 cm

B. 10 cm

C. 25 cm

D. 5 cm

47. Which angle measure describes an ACUTE angle?

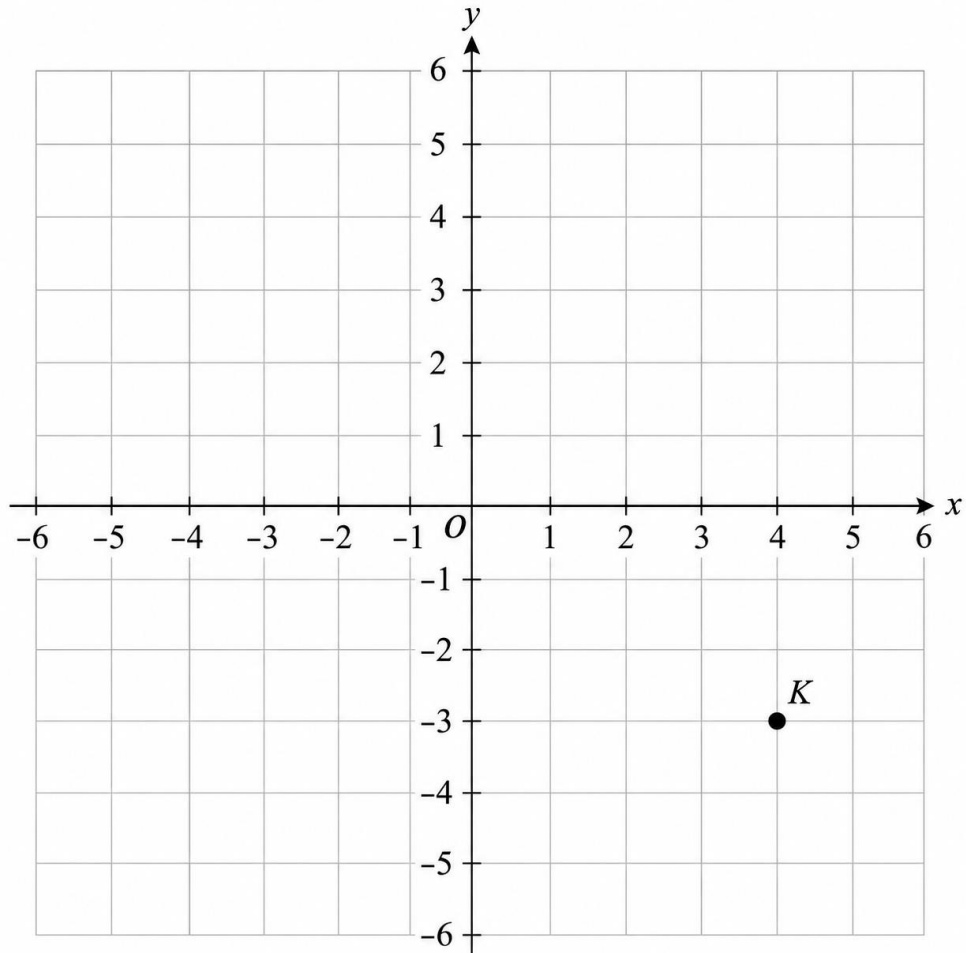
A. 45°

B. 90°

C. 135°

D. 180°

48. Look at the coordinate plane below.



In which QUADRANT is point K located?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant IV
- D. Quadrant III

49. How many VERTICES does a triangular prism have?

- A. 4
- B. 5
- C. 8
- D. 6

50. Which of the following is the BEST example of a clearly defined FINANCIAL GOAL?

- A. Wanting to be rich someday in the future
- B. Saving \$80 to buy a bike by the end of the summer
- C. Spending money quickly so it does not run out
- D. Asking parents for money whenever something is needed

SESSION D: MATHEMATICS

51. What is $1,238 + 567$?

- A. 1,705
- B. 1,805
- C. 1,795
- D. 1,895

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

- A. $\frac{4}{3}$
- B. $\frac{4}{6}$
- C. $\frac{4}{9}$
- D. $\frac{1}{2}$

53. What is 40% of 80?

- A. 32
- B. 40
- C. 80

D. 30

54. What is 7.5×4 ?

A. 28

B. 30

C. 3

D. 11.5

55. Write $\frac{9}{4}$ as a MIXED number.

A. $4 \frac{1}{2}$

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

C. $2 \frac{1}{4}$

D. $1 \frac{9}{4}$

56. Which list of decimals is in order from LEAST to GREATEST?

A. 0.5, 0.55, 0.05, 0.555

B. 0.555, 0.55, 0.5, 0.05

C. 0.05, 0.5, 0.555, 0.55

D. 0.05, 0.5, 0.55, 0.555

57. A fair coin is flipped TWICE in a row. What is the probability of getting HEADS BOTH times?

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

B. $\frac{2}{4}$

C. $\frac{1}{4}$

D. $\frac{3}{4}$

58. Solve for x in the equation $x \div 4 = 9$.

- A. 36
- B. 13
- C. 5
- D. 45

59. What is the value of $4x + 7$ when $x = 5$?

- A. 22
- B. 35
- C. 12
- D. 27

60. Which expression represents "one-half of a number n , decreased by 5"?

- A. $(n - 5) \div 2$
- B. $n/2 - 5$
- C. $5 - n/2$
- D. $2n - 5$

61. What is the 5th term in this pattern: 80, 72, 64, 56, ___ ?

- A. 50
- B. 52
- C. 48
- D. 64

62. Look at the pseudocode below:

```
SET points = 0
FOR each number from 1 to 6:
    Add 4 to points
Display points
```

What is the FINAL value of points?

- A. 24
- B. 10
- C. 30
- D. 28

63. Find the MEDIAN of these numbers: 13, 21, 9, 17, 25, 11, 19, 14.

- A. 14
- B. 17
- C. 13
- D. 15.5

64. Find the RANGE of these temperatures: 18°C, 25°C, 12°C, 20°C, 30°C.

- A. 12°C
- B. 18°C
- C. 30°C
- D. 25°C

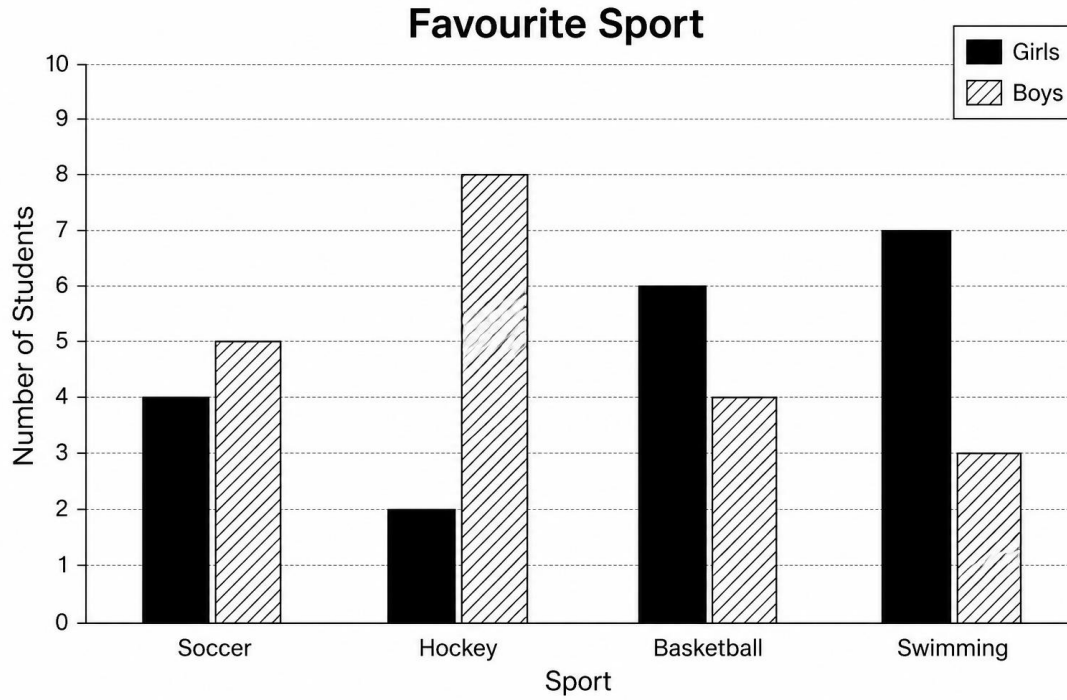
65. Find the MODE of this data set: 3, 7, 9, 3, 6, 3, 8, 7, 9.

- A. 3
- B. 7
- C. 9
- D. 6

66. A spinner has 12 equal sections: 4 red, 3 blue, 3 green, and 2 yellow. What is the probability of landing on BLUE OR GREEN?

- A. $\frac{4}{12}$
- B. $\frac{3}{12}$
- C. $\frac{6}{12}$
- D. $\frac{2}{12}$

67. Look at the double bar graph below showing favourite sport choices of girls and boys in a Grade 6 class.



How many MORE BOYS than girls chose HOCKEY as their favourite sport?

- A. 4
- B. 8
- C. 2
- D. 6

68. A cube has a side length of 5 cm. What is its VOLUME?

- A. 15 cm³
- B. 125 cm³
- C. 25 cm³
- D. 75 cm³

69. A triangle has a base of 10 cm and a height of 6 cm. What is its AREA?

- A. 30 cm^2
- B. 60 cm^2
- C. 16 cm^2
- D. 32 cm^2

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

- A. 145°
- B. 25°
- C. 90°
- D. 55°

71. How many KILOMETRES are in 4,500 metres?

- A. 45 km
- B. 4.5 km
- C. 0.45 km
- D. 450 km

72. A point is located at $(-1, 2)$. It is TRANSLATED 3 units RIGHT and 4 units DOWN. What are the new coordinates?

- A. $(-4, 6)$
- B. $(2, 6)$
- C. $(2, -2)$
- D. $(-4, -2)$

73. A pair of running shoes costs \$50. The store offers a 15% discount. What is the SALE PRICE?

- A. \$42.50
- B. \$7.50
- C. \$35.00
- D. \$57.50

74. Anna saves \$6 every week from her allowance. After how many weeks will she have saved \$54?

- A. 12 weeks
- B. 7 weeks
- C. 8 weeks
- D. 9 weeks

75. Why is it usually a GOOD idea to compare different products before making a major purchase?

- A. Comparing products takes too much time and is not worth the effort
- B. Different products may have different prices, features, and quality
- C. The first product you see is usually the best one available
- D. Stores never sell low-quality versions of the same products

ANSWER KEY & DETAILED EXPLANATIONS — SIMULATION EXAM 14

- 1. C** — The opening states: "Ben had been to the Science Centre exactly once before, when he was eight." That single childhood visit is the only prior experience described.
- 2. A** — The passage introduces her as "Their teacher, Ms. Yamamoto," who "divided the class into groups of four and gave each group a folded paper map." Both her role (teacher) and her field-trip task (organizing groups) match option A.
- 3. D** — Ben's group is listed directly: "Ben's group included Carlos, Aisha, and Jin." Those three names match option D exactly.
- 4. B** — The moment of separation is described in this sentence: "Everything was going smoothly until Ben stopped to read a sign about Jupiter." The Jupiter sign is what held his attention when his group moved on.
- 5. A** — Ben's first reaction appears in two sentences: "Ben felt his stomach drop... He could feel his heart beating fast." Both the dropped stomach and the racing heart match option A.
- 6. C** — Ben's plan after losing the group is stated directly: "They were supposed to go to the dinosaur hall next... Dinosaur hall was on Level 2, down the hallway past the gift shop." Both the location and the level match.
- 7. B** — Ben's wrong turn leads to a specific exhibit: "the hallway opened into a large room he did not recognize... There were only displays about old computers and telephones." The technology room is where he ended up.
- 8. D** — Ben's brief instinct is described in this line: "For one bad second, Ben wanted to sit down on the floor and wait for someone to find him." Sitting and waiting is the specific impulse he resists.
- 9. A** — Ben's actual strategy follows: "He turned around. He walked back the way he had come, more slowly this time, paying attention to the signs at every doorway." Turning around and reading signs carefully is what worked.
- 10. C** — The reunion scene specifies the exhibit: "Carlos, Aisha, and Jin were standing in front of the Tyrannosaurus skeleton." The T-Rex is what the group was looking at when Ben arrived.
- 11. B** — The closing line of the story states Ben's realization: "Getting lost had not been the disaster he thought it would be. It had only been a wrong hallway." The outcome was much smaller than the fear that preceded it.
- 12. OPEN-RESPONSE** — A strong Code 40 response identifies the specific steps Ben took: he took a breath and tried to think calmly, he pulled out the paper map to locate the dinosaur hall, he walked through the corridor on his own, he recognized when he had gone too far, he turned around, and he watched the

signs more carefully on the return trip. Code 40 responses cite at least two of these specific actions and explain how each one helped solve the problem.

13. C — The passage opens with the question "How did something with a heartbeat and bones lift itself into the air and stay there?" and then explains the answer through wing shape (airfoil), muscle power (thrust), and bone weight. Option C captures this three-part combination that organizes the entire passage.

14. D — The passage defines the term directly: "If you look at a wing from the side, the top surface is curved and the bottom is mostly flat. This shape is called an airfoil." Curved on top and flat on the bottom is the precise definition.

15. A — The passage explains the source of lift: "The air over the top moves faster than the air below, and the faster-moving air pushes down less strongly. The result is more pressure pushing up from below than down from above." The faster air over the curved top is what produces lift.

16. B — The passage defines thrust: "The downward stroke pushes air backward, and the air pushes the bird forward. This forward push is called thrust." Wings pushing air backward on the downstroke is the mechanism.

17. C — The passage explains the function of hollow bones: "This hollow design keeps the bird's skeleton strong while making it surprisingly light." Strength combined with lightness is the reason for hollow bones.

18. OPEN-RESPONSE — A strong Code 40 response describes how the airfoil wing shape (curved on top, flat on bottom) creates lift: as air flows around the wing, it moves faster over the curved top than under the flat bottom, which creates higher pressure pushing up from below than down from above. Code 40 responses include this airfoil/pressure explanation with two passage-supported details.

19. D — In written dialogue, the comma belongs INSIDE the closing quotation mark, and the dialogue tag ("said Marcus") follows outside in lowercase. Option D applies all three rules. The other options misplace the quotes, the comma, or the capitalization of the tag.

20. A — An exclamatory sentence expresses strong feeling and ends with an exclamation mark. Option A begins with "What a" and ends with "!", expressing strong feeling about the sunset. Option B is declarative, C is interrogative, and D is imperative.

21. C — A pronoun replaces a noun. "She" replaces a person's name as the subject of the sentence. "Brother" and "book" are nouns, and "yesterday" is an adverb describing when the action happened.

22. B — A colon can introduce a list, but only after a complete independent clause. "We need three things for the trip" is a complete clause, so the colon correctly introduces the list. Option A places a colon between a verb ("included") and its direct object, C splits a prepositional phrase, and D misuses the colon before "that."

- 23. A** — A semicolon joins two closely related independent clauses without a coordinating conjunction. Option A joins "I love to read" and "my brother prefers to watch movies" with just a semicolon. Options B and D add an unnecessary "and" after the semicolon, and C splits the sentence awkwardly.
- 24. D** — Past tense describes an action that has already happened. Option D uses past-tense verbs "arrived" and "rang" together. Option A uses future tense ("will arrive"), B uses present continuous ("are arriving"), and C uses simple present ("arrive").
- 25. B** — "Your" is the possessive form of "you," used to show ownership. Option B correctly uses "your" with "science project" (the project belonging to you). The other options use "your" where "you're" (you are) is required.
- 26. C** — The sentences describe a time relationship: the rain stopping comes first, and then the children go outside. The subordinating conjunction "when" correctly signals this time order. Option A is a comma splice, B uses "or" (which gives a choice), and D reverses the cause and effect with "because."
- 27. D** — A question inside a quotation needs four things: a comma after the speaker's verb, an opening quotation mark, a capital letter starting the question, and a question mark inside the closing quotation mark. Option D applies all of these correctly. The other options miss one or more rules.
- 28. A** — "They are" is the subject-verb pair, and "their" is the possessive pronoun (the friends belonging to them). Option A uses both forms correctly. The other options confuse "their," "there," and "they're," which sound alike but have different meanings.
- 29. B** — Descriptive language uses specific sensory details (sight, sound, texture). Option B includes colour ("shaggy brown"), texture ("muddy"), action ("raced"), and sound ("barking at the thunder"). The other options describe the same scene in plain or vague language.
- 30. C** — The imperative mood gives a direct command or instruction, with the subject "you" understood but not stated. Option C begins with the verb "Listen" and tells the reader directly what to do. The other options describe what students will do or are doing, making them declarative.
- 31. OPEN-RESPONSE** — A strong Code 30 or 40 response names ONE specific book or movie, briefly summarizes what it is about, identifies ONE clear lesson, and explains how that lesson has changed the writer's thinking or behaviour. The strongest responses move beyond a vague takeaway ("be kind") to a personal connection ("after reading Wonder, I started sitting with the new student in our class because I saw what it was like to be the one nobody knew").
- 32. D** — The digit 2 in 9,254,036 sits in the hundred thousands place (the sixth position from the right). Its value is $2 \times 100,000 = 200,000$. Place value increases by a factor of ten with each position to the left.
- 33. A** — Split one factor to use easier numbers: $60 \times 7 = 420$ and $4 \times 7 = 28$. Add the partial products: $420 + 28 = 448$. Splitting one factor into tens and ones is a reliable mental-math approach.

- 34. B** — A fraction is in simplest form when the numerator and denominator share no common factor greater than 1. Since 5 and 7 are both prime with no common factors, $5/7$ is already in simplest form. The others reduce: $4/6 = 2/3$, $6/8 = 3/4$, and $8/10 = 4/5$.
- 35. C** — A fraction can be converted to a decimal by dividing the numerator by the denominator: $3 \div 4 = 0.75$. As a check, $3/4$ represents three of four equal parts, and three quarters of a dollar is 75 cents.
- 36. D** — Compare decimals by aligning the decimal points and comparing place values from left to right. 0.305 has 3 in the tenths place (smaller than 0.4 and 0.42) and 0 in the hundredths place, making it smaller than 0.35 as well. The smallest tenths digit gives the lowest overall value.
- 37. A** — Convert the percent to a decimal and multiply: $20\% = 0.20$, then $0.20 \times 150 = 30$. As a check, 20% is one-fifth, and one-fifth of 150 is 30.
- 38. C** — Align the decimals before adding: $5.60 + 4.85 = 10.45$. Writing 5.6 as 5.60 makes the place-value columns line up cleanly for adding.
- 39. D** — Divide step by step: $8 \times 80 = 640$, and $672 - 640 = 32$. Then $32 \div 8 = 4$, so the quotient is $80 + 4 = 84$. As a check, $8 \times 84 = 672$.
- 40. A** — To isolate p , divide both sides by 2: $p = 18 \div 2 = 9$. The inverse operation undoes the multiplication and keeps the equation balanced.
- 41. B** — Substitute $n = 4$ into $7n - 5$: $7(4) - 5 = 28 - 5 = 23$. Order of operations requires multiplication before subtraction.
- 42. C** — "Three times a number n " translates to $3n$, and "plus 8" adds 8: $3n + 8$. The order matters: multiplying n by 3 first and then adding 8 is different from grouping (which would use parentheses).
- 43. D** — The pattern multiplies by 3 each time: $2 \rightarrow 6 \rightarrow 18 \rightarrow 54 \rightarrow 162$. A constant ratio of 3 identifies the pattern as multiplicative.
- 44. A** — Reading the stem-and-leaf plot, the row for stem 7 has six leaves (1, 2, 4, 6, 8, 9), each representing one student. Six students scored in the 70s — the tallest "row" in the plot.
- 45. C** — Add the five numbers: $15 + 12 + 18 + 20 + 10 = 75$. Divide by the number of values: $75 \div 5 = 15$. The mean is the total divided by the count.
- 46. B** — Perimeter of a rectangle = $2(\text{length} + \text{width})$. Substitute: $50 = 2(15) + 2W$, so $50 = 30 + 2W$, and $2W = 20$, giving $W = 10$ cm. Inverse operations isolate the unknown.
- 47. A** — An acute angle measures less than 90° . Only 45° fits this definition — 90° is a right angle, 135° is obtuse, and 180° is a straight angle.

48. C — Point K sits at $(4, -3)$, which means x is positive (right of the y -axis) and y is negative (below the x -axis). The bottom-right region of the coordinate plane is Quadrant IV. Quadrants are numbered counterclockwise starting from the top-right.

49. D — A triangular prism has two triangular ends, each with 3 vertices, for a total of 6 vertices. The triangular faces are connected by three rectangular faces, but no new vertices are added beyond the original 6.

50. B — A clearly defined financial goal is specific, measurable, and time-bound. Option B includes a specific amount (\$80), a clear item to purchase (a bike), and a deadline (by the end of summer). The other options are vague, harmful, or do not describe goal-setting at all.

51. B — Add the numbers in columns from right to left, regrouping as needed: $1,238 + 567 = 1,805$. As a check, round to $1,200 + 600 = 1,800$, close to the actual answer.

52. D — Rewrite $1/3$ with the common denominator 6: $1/3 = 2/6$. Subtract: $5/6 - 2/6 = 3/6$, which simplifies to $1/2$. Fractions can be subtracted only after the denominators match.

53. A — Convert the percent to a decimal and multiply: $40\% = 0.40$, then $0.40 \times 80 = 32$. As a check, 10% of 80 is 8, so 40% is $4 \times 8 = 32$.

54. B — Multiply as if there were no decimal: $75 \times 4 = 300$. The factor 7.5 has one decimal place, so the answer has one decimal place: 30.0, which equals 30. Counting decimal places in the factors gives the placement in the answer.

55. C — Divide the numerator by the denominator to find the whole part: $9 \div 4 = 2$ with remainder 1. The mixed number is $2 \frac{1}{4}$ (two whole units plus one quarter of another). The remainder becomes the new numerator, and the denominator stays the same.

56. D — To order decimals from least to greatest, write them with the same number of decimal places: 0.050, 0.500, 0.550, 0.555. Comparing from left to right gives the order $0.05 < 0.5 < 0.55 < 0.555$. Option D lists them in this correct order.

57. C — When flipping two coins, the possible outcomes are HH, HT, TH, and TT — four equally likely outcomes. Only one (HH) gives heads both times, so $P(\text{HH}) = 1/4$. Multiplying independent probabilities also gives $(1/2) \times (1/2) = 1/4$.

58. A — To isolate x , multiply both sides by 4: $x = 9 \times 4 = 36$. The inverse operation undoes the division and keeps the equation balanced.

59. D — Substitute $x = 5$ into $4x + 7$: $4(5) + 7 = 20 + 7 = 27$. Order of operations requires multiplication before addition.

60. B — "One-half of a number n " translates to $n/2$, and "decreased by 5" subtracts 5: $n/2 - 5$. The order matters: dividing n by 2 first and then subtracting 5 is different from grouping (which would use parentheses).

- 61. C** — The pattern subtracts 8 each time: $80 \rightarrow 72 \rightarrow 64 \rightarrow 56 \rightarrow 48$. The 5th term is 48. A constant difference identifies the pattern as subtractive with step 8.
- 62. A** — Trace through the loop, adding 4 to points at each of the 6 iterations: starting at 0, the running total reaches 4, 8, 12, 16, 20, 24. The final displayed value is 24, which is also 6×4 .
- 63. D** — Arrange the values in order: 9, 11, 13, 14, 17, 19, 21, 25. With eight values (an even number), the median is the average of the two middle values: $(14 + 17) \div 2 = 31 \div 2 = 15.5$.
- 64. B** — Range equals the largest value minus the smallest value. The highest temperature is 30°C and the lowest is 12°C , so the range is $30 - 12 = 18^{\circ}\text{C}$.
- 65. A** — The mode is the value that appears most often in the data set. The number 3 appears three times — more than any other value — making it the mode.
- 66. C** — $P(\text{blue}) = 3/12$ and $P(\text{green}) = 3/12$. Since the events are mutually exclusive (the spinner cannot land on both colours at once), add the probabilities: $P(\text{blue or green}) = 3/12 + 3/12 = 6/12$. Adding probabilities is the standard approach for either-or outcomes.
- 67. D** — The double bar graph shows boys at 8 students and girls at 2 students for Hockey. Subtract: $8 - 2 = 6$ more boys than girls chose hockey. Comparing the two bars at each category gives the difference.
- 68. B** — Volume of a cube = side \times side \times side = $5 \times 5 \times 5 = 125 \text{ cm}^3$. The unit is cubed because volume measures three-dimensional space.
- 69. A** — Area of a triangle = $(1/2) \times \text{base} \times \text{height} = (1/2) \times 10 \times 6 = 30 \text{ cm}^2$. The formula uses one-half because a triangle is half of the rectangle that would have the same base and height.
- 70. D** — Two angles are complementary when they add to 90° . Subtract the known angle: $90^{\circ} - 35^{\circ} = 55^{\circ}$. Complementary angles together form a right angle.
- 71. B** — Since 1 kilometre equals 1,000 metres, divide by 1,000 to convert from metres to kilometres: $4,500 \div 1,000 = 4.5 \text{ km}$. Moving from a smaller unit to a larger unit requires division.
- 72. C** — Translating 3 units right adds 3 to the x-coordinate, and translating 4 units down subtracts 4 from the y-coordinate. Applied to $(-1, 2)$: $(-1 + 3, 2 - 4) = (2, -2)$.
- 73. A** — First find the discount: $15\% \text{ of } \$50 = 0.15 \times \$50 = \$7.50$. Subtract the discount from the original price: $\$50 - \$7.50 = \$42.50$. The sale price is what the customer pays after the discount.
- 74. D** — Divide the savings target by the weekly amount: $\$54 \div \$6 = 9 \text{ weeks}$. As a check, $\$6 \times 9 = \54 , confirming the total.
- 75. B** — Different stores and brands sell similar products at different price points, with different features, and at different quality levels. Comparing options helps the buyer find the best balance of value and quality. The other options describe assumptions that do not match how the real marketplace works.