Merit Tutoring

WORKSHEET 39

Locating and Plotting Coordinates

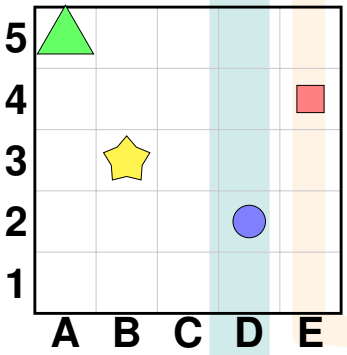
Year 5 Mathematics — Space & Shapes Strand

Australian Curriculum v9.0 — AC9M5SP02

Name: _____ **Date:** _____

Section 1: Fluency - Reading the Grid

Question 1: Look at the grid below. What are the coordinates of the star?



Answer: _____

Question 2: What symbol is located at D2?

Answer: _____

Question 3: What are the coordinates of the triangle?

Answer: _____

Question 4: What shape is at E4?

Answer: _____

Question 5: If you place a heart at C1, what would its coordinates be?

Answer: _____

Question 6: How many shapes are shown on the grid above?

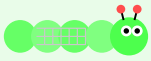
Answer: _____

Question 7: Which column (letter) contains the star?

Answer: _____

Question 8: Which row (number) contains the circle?

Answer: _____



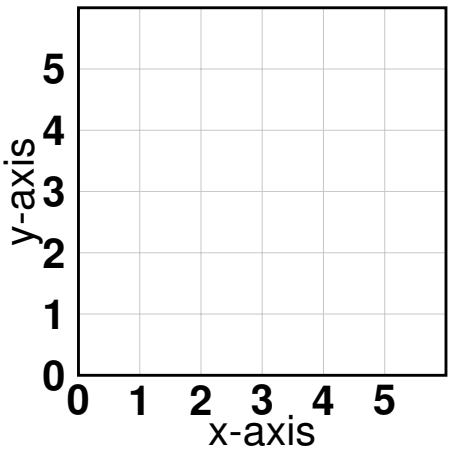
Coordinate Caterpillar Says:

"You've Got Grid Greatness!"

Joke Time: Why did the student bring a ladder to the grid? Because they wanted to reach the high coordinates!

Section 2: Reasoning - Plotting Points

Question 9: Use the grid below to plot points. Plot a point at (2, 4) and label it 'Home'.



Answer: _____

Question 10: On the same grid above, plot a point at (5, 1) and label it 'Park'.

Answer: _____

Question 11: Plot a point at (0, 3) and label it 'School'.

Answer: _____

Question 12: What are the coordinates of a point halfway between (0, 0) and (4, 0)?

Answer: _____

Question 13: Plot a point at (3, 3). What is special about this point?

Answer: _____

Question 14: If you plot points at (1, 1) and (1, 5), what do you notice about

their x-coordinates?

Answer: _____

Question 15: Plot the following points and join them with straight lines: (1, 2), (4, 2), (4, 5). What shape is formed?

Answer: _____

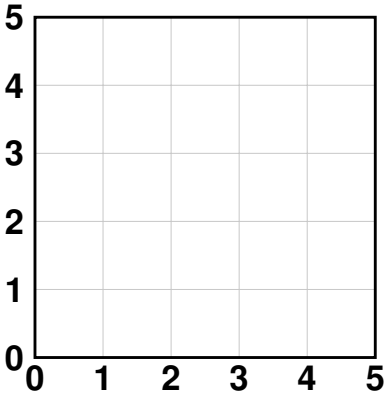
Plotting Penguin Says:

"You're a Coordinate Captain!"

Joke Time: What did the x-axis say to the y-axis?
We make a great pair!

Section 3: Challenge - Mystery Shape

Question 16: Use the grid below. Plot the points (1,1), (1,4), (4,4), and (4,1). Join them together. What shape have you made?



Answer: _____

Question 17: Plot these points and join them in order: (2, 1), (3, 3), (4, 1). What shape is formed?

Answer: _____

Question 18: A rectangle has corners at (1, 2), (1, 4), (5, 4), and one more point. What is the fourth point?

Answer: _____

Question 19: Challenge: Plot points that form a letter 'L'. List three coordinates you used.

Answer: _____

Question 20: If you plot (0, 0), (3, 0), (3, 3), and (0, 3), what type of quadrilateral is formed?

Answer: _____

Question 21: Challenge: Create a pattern by plotting (1, 1), (2, 2), (3, 3), (4, 4). What do you notice?

Answer: _____

Question 22: Plot the vertices of a triangle at (1, 1), (3, 1), and (2, 4). What type of triangle is it?

Answer: _____

Shape Detective Dog Says:

“You’re a Shape Master!”

Joke Time: Why did the coordinate go to school?
To improve its plotting skills!

Excellent work! Check your answers on the next page.

WORKSHEET 39
ANSWER KEY

Section 1: Fluency - Reading the Grid

1. B3 **2.** Circle (or blue circle) **3.** A5 **4.** Square (or rectangle)
5. C1 **6.** 4 shapes **7.** Column B **8.** Row 2

Section 2: Reasoning - Plotting Points

9. Point plotted at (2, 4) labeled 'Home'
10. Point plotted at (5, 1) labeled 'Park'
11. Point plotted at (0, 3) labeled 'School'
12. (2, 0)
13. It's in the middle of the grid; both coordinates are the same
14. They have the same x-coordinate (both are 1); they form a vertical line
15. A right-angled triangle (or L-shape)

Section 3: Challenge - Mystery Shape

16. Square (or rectangle with equal sides)
17. Triangle (isosceles triangle)
18. (5, 2)
19. Answers may vary, e.g., (1, 1), (1, 3), (3, 1) or similar
20. Square
21. The points form a diagonal line; x and y are always equal
22. Isosceles triangle (or tall triangle)

WORKSHEET 40

Movement and Directional Language

Year 5 Mathematics — Space & Shapes Strand

Australian Curriculum v9.0 — AC9M5SP02

Name: _____ **Date:** _____

Section 1: Fluency - Simple Movement

Question 1: Start at (1, 1). Move 3 units Right and 2 units Up. Where are you now?

Answer: _____

Question 2: Start at (5, 4). Move 2 units Left. What are your new coordinates?

Answer: _____

Question 3: Start at (2, 3). Move 3 units Up. Where are you?

Answer: _____

Question 4: Start at (4, 5). Move 4 units Down. What are your coordinates?

Answer: _____

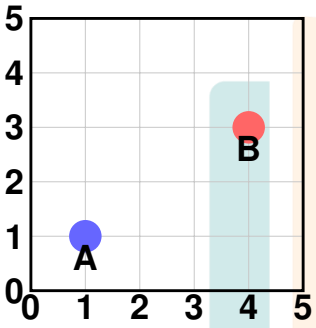
Question 5: Start at (0, 0). Move 2 units Right and 2 units Up. Where do you end up?

Answer: _____

Question 6: Start at (3, 2). Move 1 unit Left and 3 units Up. What are your new coordinates?

Answer: _____

Question 7: Look at the grid below. If you start at position A and move to position B, how many units Right and Up did you move?



Answer: _____

Question 8: Start at (5, 5). Move 5 units Down and 3 units Left. Where are you now?

Answer: _____

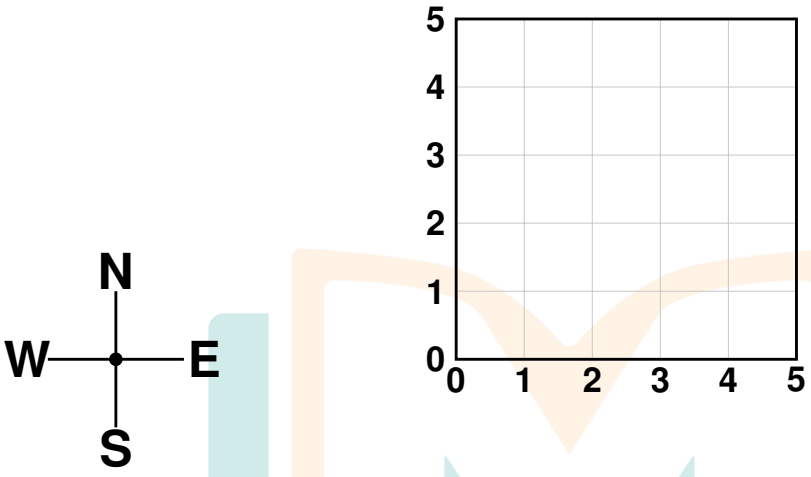
Movement Monkey Says:

"You're Moving Like a Pro!"

Joke Time: Why don't coordinates ever get lost? They always know their position!

Section 2: Reasoning - Compass Directions

Question 9: Look at the compass rose below. You are at (3, 3). If you move 2 units North, what are your new coordinates?



Answer: _____

Question 10: You are at (4, 2). Move 3 units West. Where are you now?

Answer: _____

Question 11: Start at (1, 4). Move 2 units East and 1 unit South. What are your coordinates?

Answer: _____

Question 12: You are at (5, 1). Move 4 units North. Where do you end up?

Answer: _____

Question 13: True or False: Moving East increases the x-coordinate.

Answer: _____

Question 14: True or False: Moving South increases the y-coordinate.

Answer: _____

Question 15: From (2, 2), you move 1 unit North and 1 unit East. Describe your path using coordinates.

Answer: _____

Question 16: Which direction do you move to increase the y-coordinate?

Answer: _____

Compass Kangaroo Says:

"You've Got Direction!"

Joke Time: Why did the compass go to school?
To find its true direction in life!

Section 3: Challenge - Route Finding

Question 17: Describe a path from (0, 0) to (4, 5) using the words 'Up', 'Down', 'Left', or 'Right'.

Answer: _____

Question 18: A treasure is hidden at (5, 5). You start at (2, 2). What is the shortest way to get there? Describe your path.

Answer: _____

Question 19: You need to visit three locations: Start at (0, 0), go to (3, 0), then to (3, 4), then to (0, 4). Draw this path and describe what shape it forms.

Answer: _____

Question 20: Challenge: Create directions for a friend to follow from (1, 1) to (5, 3) using only compass directions (N, S, E, W).

Answer: _____

Question 21: A robot at (0, 5) needs to reach (5, 0). If it can only move Right or Down, describe one possible path.

Answer: _____

Question 22: You walk from (1, 2) to (4, 2), then to (4, 5). What two directions did you use?

Answer: _____

Question 23: Challenge: If you start at (3, 3) and make a square with side length 2, what are the coordinates of all four corners?

Answer: _____

Question 24: Create a path that visits (1, 1), (1, 4), (4, 4), and returns to (1, 1). Describe the movements.

Answer: _____

Map-Reading Koala Says:

"You're a Navigation Master!"

Joke Time: Why did the map go to therapy?
It had too many issues with directions!

Outstanding work! Check your answers on the next page.

WORKSHEET 40

ANSWER KEY

Section 1: Fluency - Simple Movement

1. (4, 3) **2.** (3, 4) **3.** (2, 6) - or (2, 5) if using 0-5 grid
4. (4, 1) **5.** (2, 2) **6.** (2, 5)
7. 3 units Right and 2 units Up
8. (2, 0)

Section 2: Reasoning - Compass Directions

9. (3, 5) - North means Up, increasing y-coordinate
10. (1, 2) - West means Left, decreasing x-coordinate
11. (3, 3) - East increases x, South decreases y
12. (5, 5)
13. True
14. False (South decreases y-coordinate; North increases it)
15. Start at (2, 2), move to (2, 3) then to (3, 3)
16. North (or Up)

Section 3: Challenge - Route Finding

17. Move 4 units Right, then 5 units Up (or variations like: Right 4, Up 5)
18. Move 3 units Right and 3 units Up (or 3 East and 3 North)
19. Three sides of a rectangle/square (or three sides of a square with side length 3 or 4)
20. Move 4 units East, then 2 units North (or 2 North, then 4 East)
21. Move 5 units Right, then 5 units Down (or variations: Down 5, Right 5)
22. Right (or East) and Up (or North)
23. (3, 3), (5, 3), (5, 5), (3, 5) - or starting from (2, 2): (2, 2), (4, 2), (4, 4), (2, 4)
24. Up 3, Right 3, Down 3, Left 3 (forming a square path)

Brilliant!

You've mastered Grid Coordinates!
Keep up the fantastic work in Year 5 Maths!