Tables of values and plotting points: 10 practice questions

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Name: _____ Date: _____

Attempt all questions and show your working. Suggested time: 15 to 20 minutes.

Section A: Consolidating (Questions 1-4)

Question 1

Complete the table of values for the rule y = x + 3.

x	0	1	2	3	4
y					

Question 2

Write the coordinates of the point that is 4 units to the right of the origin and 2 units down.

Question 3

In which quadrant of the Cartesian plane does the point (-3, 5) lie?

Question 4

Complete the table of values for the rule y = 2x.

x	1	2	3	4	5
y					

Section B: Standard (Questions 5-10)

Question 5

Matchsticks are used to make a row of squares. One square uses 4 matchsticks, two squares in a row use 7 matchsticks, and three squares in a row use 10 matchsticks.

(a) Complete the table.

Squares (s)	1	2	3	4	5

Matchsticks (m)	4	7	10

(b) Write a rule for m in terms of s.

(c) How many matchsticks are needed for 20 squares?

Question 6

Look at this table of values.

x	1	2	3	4
y	5	9	13	17

(a) Write the rule linking y and x.

(b) Find y when x = 10.

Question 7

(a) Complete the table of values for y = 3x - 2.

x	0	1	2	3	4
y					

(b) Write the points as coordinates. If you plot them on a Cartesian plane, what do you notice?

Question 8

The points A(1, 1), B(5, 1), C(5, 4) and D(1, 4) are plotted on a Cartesian plane and joined in order.

(a) What shape is ABCD?

(b) Find its perimeter and area in square units.

Question 9

Which of these points lie on the line y = 2x + 1? Show your working. (3, 7), (5, 10), (0, 1), (-2, -3)

Question 10

A tile pattern grows so that Pattern 1 has 3 tiles, Pattern 2 has 5 tiles and Pattern 3 has 7 tiles.

(a) Write a rule for the number of tiles t in Pattern n.

(b) How many tiles are in Pattern 15?

(c) Which pattern has 45 tiles?

Tables of values and plotting points: answers

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Question 1

Answer: 3, 4, 5, 6, 7

Question 2

Answer: (4, -2)

Question 3

Answer: second quadrant (top left)

Question 4

Answer: 2, 4, 6, 8, 10

Question 5

Answer: (a) 13, 16 (b) m = 3s + 1 (c) 61

Question 6

Answer: (a) y = 4x + 1 (b) 41

Question 7

Answer: (a) -2, 1, 4, 7, 10 (b) (0, -2), (1, 1), (2, 4), (3, 7), (4, 10); the points lie in a straight line.

Question 8

Answer: (a) rectangle (4 units by 3 units) (b) perimeter 14 units, area 12 square units

Question 9

Answer: (3, 7), (0, 1) and (-2, -3). For (5, 10), 2 × 5 + 1 = 11, not 10.

Question 10

Answer: (a) t = 2n + 1 (b) 31 (c) Pattern 22