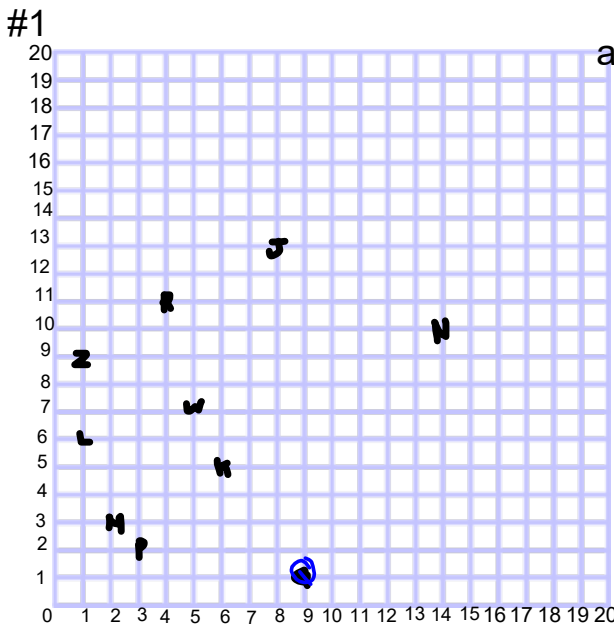




Grade 6 Math
Date: Oct. 30



a) Tell what point is located at each ordered pair.

a) (6, 5) ^K b) (3, 2) ^P

c) (1, 9) ^Z d) (9, 1) ^Q

b) What is the ordered pair for W?

$W(5, 7)$

c) What is the ordered pair for N?

$N(14, 10)$

Hard

2) Write the expression for the following chart

x	y
5	19
8	28
11	37
14	46

$\frac{\Delta \text{out}}{\Delta \text{in}}$

$\frac{9}{3} = 3$

$3x + 4$

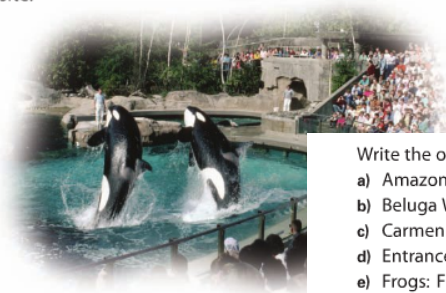
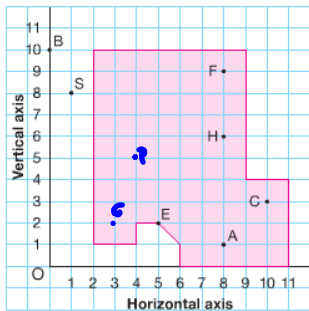
Input 5 out 19

$3 \times 5 = 15$
need 4 more

Not this
hard of one on test

Homework Solutions

4. Mr. Kelp's class went to the Vancouver Aquarium. Angel drew this map of the aquarium site.



Write the ordered pair for each place.

- a) Amazon Jungle Area: A (9, 1)
- b) Beluga Whales: B (1, 10)
- c) Carmen the Reptile: C (10, 3)
- d) Entrance: E (5, 2)
- e) Frogs: F (8, 9)
- f) Sea Otters: S (1, 8)
- g) Sharks: H (7, 6)

5. Use the map in question 4.

- a) To get to the Pacific Canada Pavilion at point P: (4, 5)
You move 1 square left and 3 squares up from the entrance, E.
What are the coordinates of P?
- b) To get to the Clam Shell Gift Shop at point G: 3, 2
You move 5 squares left and 4 squares down from the sharks, H.
What are the coordinates of G?

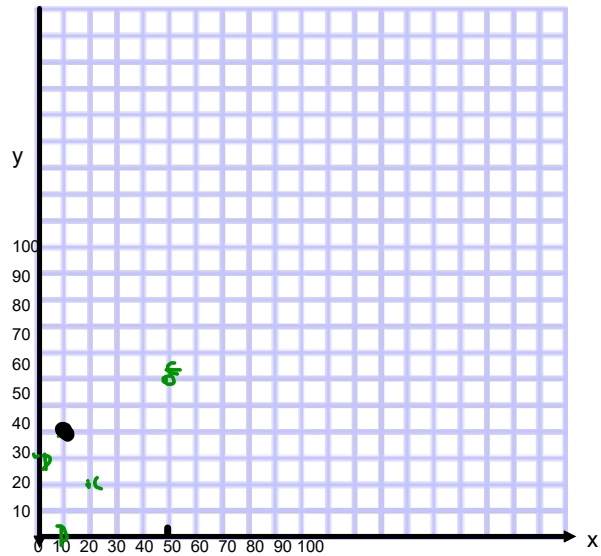


6. Draw and label a coordinate grid.

Plot each point on the grid.

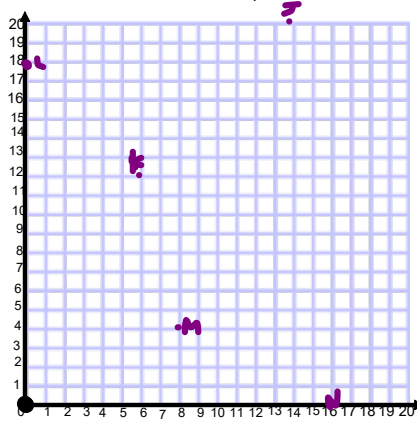
How did you decide which scale to use on the axes?

- a) A(10, 40)
- b) B(10, 0)
- c) C(20, 20)
- d) D(0, 30)
- e) E(50, 60)

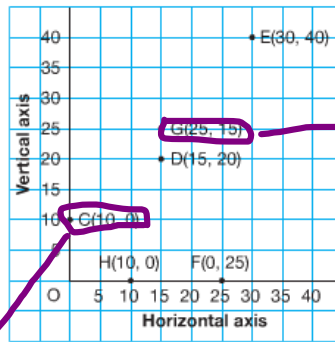


Homework Solutions

7. Draw and label a coordinate grid.
 Plot each point on the grid.
 How did you decide which scale to use on the axes?
 a) J(14, 20) b) K(6, 12) c) L(0, 18) d) M(8, 4) e) N(16, 0)



8. A student plotted 6 points on a coordinate grid, then labelled each point with its coordinates. The student has made some mistakes. For each point that has been labelled incorrectly:
- Explain the mistake.
 - Write the coordinates that correctly describe the location of the point.

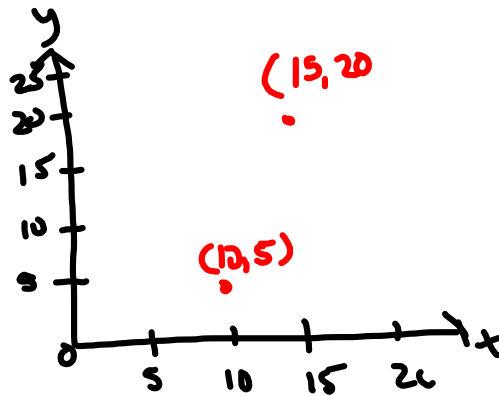


Handwritten corrections for point G: $(15, 25)$
 Handwritten correction for point D: $(0, 10)$

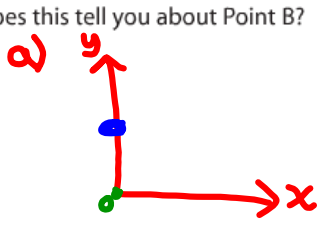
The student mixed up the coordinates for x and y



9. Draw and label a coordinate grid. Use a scale of 1 square represents 5 units. Plot 5 points on the grid. Use an ordered pair to describe the location of each point.



10. a) The first number in the ordered pair for Point A is 0. *the point lies on the y axis*
 What does this tell you about Point A?
 b) The second number in the ordered pair for Point B is 0. *the point lies on the x axis*
 What does this tell you about Point B?



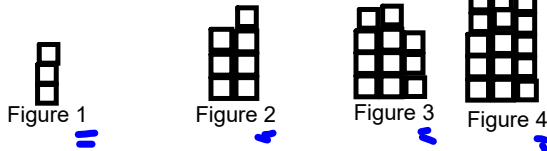
Handwritten notes: $(0, \text{---})$ No left or Right Just up



PR2: Represent & describe patterns using tables and graphs

Lesson 6: Drawing the Graph of a pattern

Recall making tables for patterns

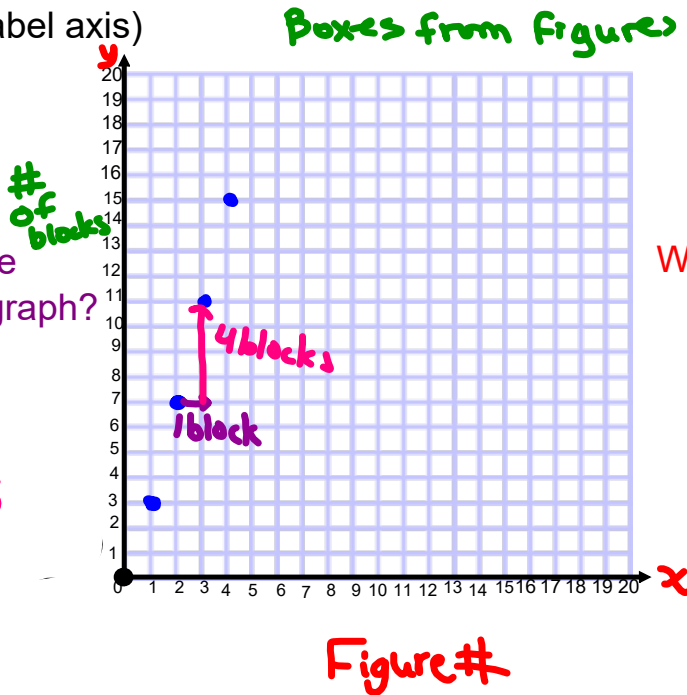


a) Make an input/output table that relates the figure number to the number of blocks.

Figure ^x	# of blocks ^y	(x,y) ordered Pairs
1	3	(1,3)
2	7	(2,7)
3	11	(3,11)
4	15	(4,15)

Handwritten notes: "Increase by 1" with an arrow pointing from 1 to 2 in the Figure column. "4" with a curved arrow pointing from 7 to 11 in the # of blocks column.

c) Plot each ordered pair on a coordinate grid. Describe the graph formed by the points. (Label axis)



What do you notice happening in the graph?

*x increases by 1 →
→ y increases by 4 ↑*

What does it look like?

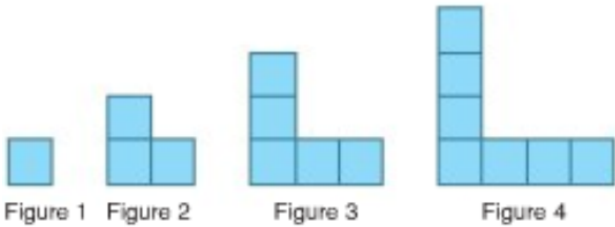
↳ Straight diagonal line.



YOU TRY

PR2: Represent & describe patterns using tables and graphs

Lesson 6: Drawing the Graph of a pattern



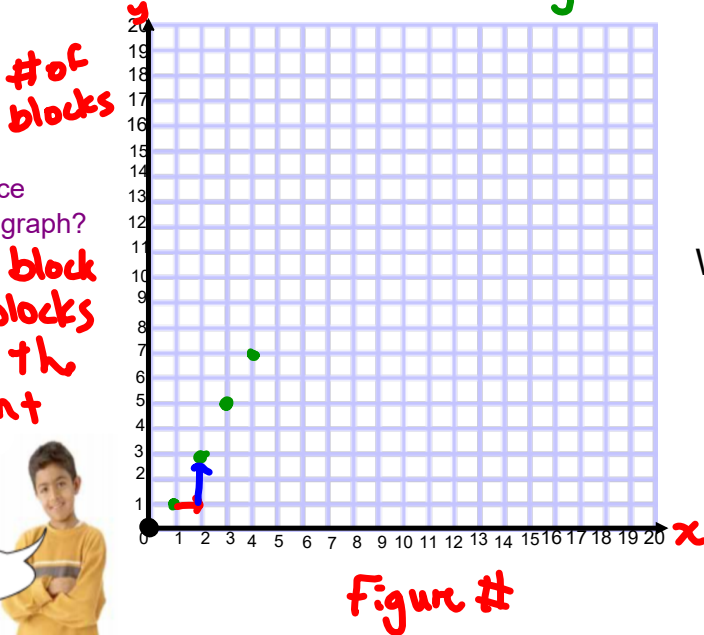
a) Make an input/output table that relates the figure number to the number of blocks.

Figure	# of blocks	(x,y) ordered Pairs
1	1	(1,1)
2	3	(2,3)
3	5	(3,5)
4	7	(4,7)

b) Extend the table to represent each figure number and #of blocks as an ordered pair.

c) Plot each ordered pair on a coordinate grid. Describe the graph formed by the points. (Label axis)

Blocks of Figures



What do you notice happening in the graph?

over one block up two blocks to get to the next point

What does it look like?

→ Straight line of dots "diagonal" line

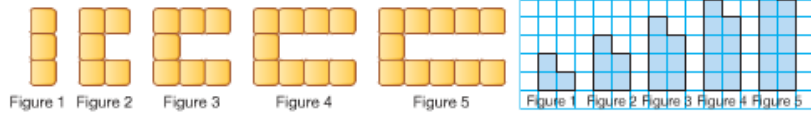
To get from one point to the next



Connect

► Here are some different ways to represent a pattern.

- Model the pattern with tiles or on grid paper.



- Make a table. Include a column for ordered pairs.

Figure Number	Number of Tiles	Ordered Pair
1	3	(1, 3)
2	5	(2, 5)
3	7	(3, 7)
4	9	(4, 9)
5	11	(5, 11)
6	13	(6, 13)
7	15	(7, 15)

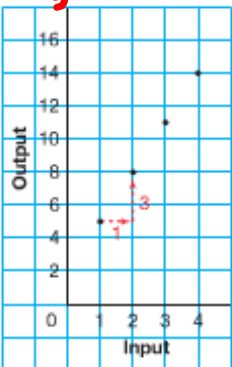
The figure number is the first coordinate. The number of tiles in a figure is the second coordinate.

We have extended the table to find the number of tiles in the 7th figure.

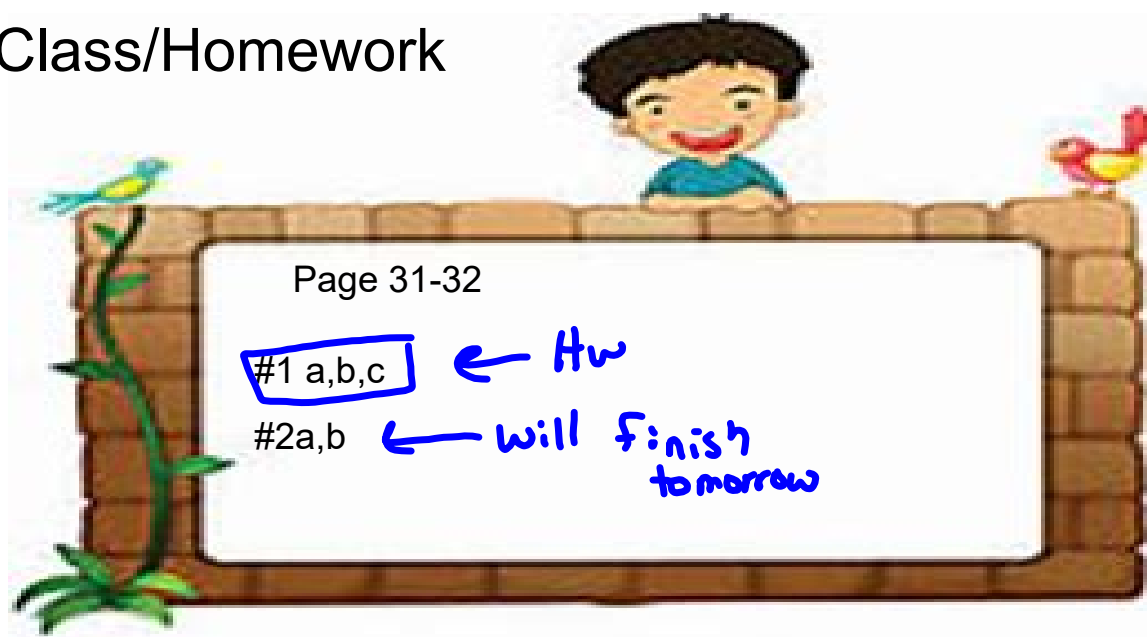
► We can graph the relationship shown in an Input/Output table.

Input	Output
1	5
2	8
3	11
4	14

As the input increases by 1, the output increases by 3.



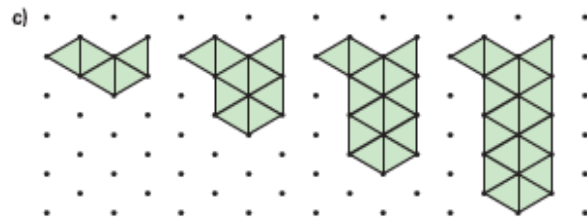
Class/Homework



Practice



1. Record each pattern in a table. Then draw a graph to represent the pattern. Explain how the graph represents the pattern.



2. Use grid paper. Graph each table.
Describe the relationship shown on the graph.

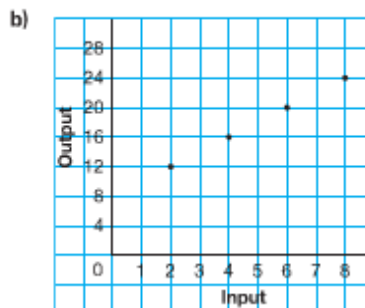
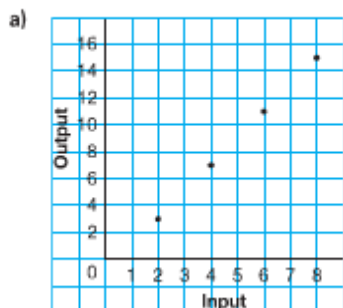
a)

Input	Output
1	3
2	6
3	9
4	12

b)

Input	Output
1	5
2	6
3	7
4	8

3. For each graph, make an Input/Output table.





4. Use grid paper.
- Graph the data in the table.
 - Describe the relationship shown on the graph.
 - Write an expression to represent the pattern.
 - Find the number of shapes in the 8th figure.
What strategy did you use?
Could you use the same strategy to find the number of shapes in the 18th figure?
Explain.

Figure Number	Number of Shapes
1	1
2	6
3	11
4	16
5	21

5. Use grid paper.
 - a) Make a table.
Record the figure number and the number of counters in a figure.
 - b) How does the graph represent the pattern?
 - c) Find the number of counters in the 7th figure.
Describe the strategy you used.
 - d) How many counters are in the 23rd figure?
Describe the strategy you used to find out.

