

Name _____

Distance Learning

Mr. EJ's 5th Grade 3/30 to 4/3

Completed work can be photographed and Posted to Google Classroom

Monday

- ☐ Math: Lesson Unit 7-14 Determining function machine rule, next number in pattern
- ☐ Reading Skills: Central Idea and Details of Scope Article: **Saving America's Wolves**
- ☐ Read for 20 minutes and answer 2 questions on Google Classroom.
- ☐ Social Studies: BrainPop Conquistadors Video Assignment on Google Classroom
- ☐ Watch the movie then take the quiz: Record your score here _____

Tuesday

- ☐ Math: Lesson 7-15 Determine input/output number given a rule, or several input/output examples
- ☐ Reading Skills: Scope Article: **Saving America's Wolves** quiz on Text Features on Google Classroom
- ☐ Read for 20 minutes or more in a book of your choice
- ☐ Social Studies: BrainPop.com Columbian Exchange Video Assignment on Google Classroom
- ☐ Watch the movie then take the quiz Record your score here _____

Wednesday

- ☐ Math: Lesson 7-16 Determine a rule given a completed function table
- ☐ Reading Skills: Scope Article: **Saving America's Wolves** What are 3 things you learned from the article? Use complete sentences to answer the question on Google Classroom. Use examples from the text.
- ☐ Read for 20 minutes or more in a book of your choice
- ☐ Science: BrainPop.com Pulley Video Assignment on Google Classroom
- ☐ Watch the movie then take the quiz Record your score here _____

Thursday

- ☐ Math: Lesson 7-17 Plotting Points on a coordinate grid
- ☐ Reading Skills: Scope Article- Read **The Great Stink** on Google Classroom and answer the question in complete sentences.
- ☐ Read for 20 minutes or more in a book of your choice
- ☐ Science: Simple Machines: The Pulley video at <https://www.youtube.com/watch?v=r3Ru1zZjvug>
- ☐ Complete the worksheet from the week's packet by filling in each key word on a piece of notebook paper and uploading the photo to Google Classroom on the assignment.

Friday

- ☐ Math: 7-18 Connect a growing pattern with a coordinate grid
- ☐ Math: Play What's the Point? Located at <https://www.funbrain.com/games/whats-the-point>
- ☐ Reading Skills: Read the Scope article **Toilets of the Future** and take the quiz on Google Classroom
- ☐ Read 20 minutes or more from a text of your choice.



Determine what rule the function machine is using.

Answers

1)

In	Out
20	32
33	45
34	46
36	48
47	59

- A. Subtract 12
B. Add 12
C. Subtract 14
D. Add 14

2)

In	Out
26	12
28	14
49	35
54	40
61	47

- A. Add 15
B. Add 14
C. Subtract 11
D. Subtract 14

3)

In	Out
10	16
23	29
26	32
40	46
43	49

- A. Add 6
B. Subtract 6
C. Add 9
D. Add 5

4)

In	Out
18	22
29	33
31	35
33	37
49	53

- A. Add 1
B. Subtract 4
C. Subtract 5
D. Add 4

5)

Input	Output
27	21
34	28
37	31
38	32
55	49

- A. Add 6
B. Subtract 4
C. Subtract 6
D. Add 7

6)

In	Out
23	14
29	20
38	29
45	36
51	42

- A. Subtract 8
B. Subtract 10
C. Add 10
D. Subtract 9

7)

In	Out
24	16
31	23
38	30
45	37
51	43

- A. Add 8
B. Subtract 8
C. Subtract 9
D. Subtract 5

8)

Input	Output
24	13
25	14
48	37
49	38
53	42

- A. Subtract 13
B. Subtract 11
C. Add 11
D. Subtract 9

9)

In	Out
27	15
31	19
42	30
51	39
58	46

- A. Add 13
B. Subtract 12
C. Add 12
D. Subtract 11

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

**Determine which choice best answers the question.****Answers**

- | | |
|--|--|
| 1) Which choice best demonstrates a pattern with the rule subtract 7?
A. 37, 30, 23, 16, 9
B. 28, 22, 16, 10, 4
C. 10, 8, 6, 4, 2
D. 33, 25, 17, 9, 1 | 2) Which choice best demonstrates a pattern with the rule add 9?
A. 9, 19, 29, 39, 49
B. 3, 12, 21, 30, 39
C. 8, 11, 14, 17, 20
D. 2, 12, 22, 32, 42 |
| 3) Which choice best demonstrates a pattern with the rule add 3?
A. 8, 10, 12, 14, 16
B. 3, 6, 9, 12, 15
C. 2, 9, 16, 23, 30
D. 7, 13, 19, 25, 31 | 4) Which choice best demonstrates a pattern with the rule add 2?
A. 5, 7, 9, 11, 13
B. 5, 15, 25, 35, 45
C. 10, 18, 26, 34, 42
D. 2, 9, 16, 23, 30 |
| 5) Which choice best demonstrates a pattern with the rule add 2?
A. 5, 7, 9, 11, 13
B. 7, 13, 19, 25, 31
C. 1, 10, 19, 28, 37
D. 6, 15, 24, 33, 42 | 6) Which choice best demonstrates a pattern with the rule subtract 6?
A. 31, 25, 19, 13, 7
B. 45, 36, 27, 18, 9
C. 36, 28, 20, 12, 4
D. 46, 37, 28, 19, 10 |
| 7) Which choice best demonstrates a pattern with the rule subtract 8?
A. 36, 28, 20, 12, 4
B. 27, 22, 17, 12, 7
C. 13, 11, 9, 7, 5
D. 22, 17, 12, 7, 2 | 8) Which choice best demonstrates a pattern with the rule add 5?
A. 7, 14, 21, 28, 35
B. 5, 10, 15, 20, 25
C. 6, 12, 18, 24, 30
D. 1, 4, 7, 10, 13 |
| 9) Which choice best demonstrates a pattern with the rule subtract 2?
A. 33, 27, 21, 15, 9
B. 38, 29, 20, 11, 2
C. 11, 9, 7, 5, 3
D. 44, 35, 26, 17, 8 | 10) Which choice best demonstrates a pattern with the rule add 10?
A. 6, 8, 10, 12, 14
B. 5, 8, 11, 14, 17
C. 10, 16, 22, 28, 34
D. 8, 18, 28, 38, 48 |

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Input/Output Machines



Quick Review

This is an **Input/Output machine**.
It can be used to make a growing pattern.

Each input is multiplied by 9 to get the output.

If you input 1, the output is 9.

If you input 2, the output is 18.

The pattern rule for the output is:

Start at 9. Add 9 each time.



Input	Output
1	9
2	18
3	27
4	36
5	45

Try These

1. Complete the table of values for each Input/Output machine.

a)



Input	Output
17	
16	
15	
14	
13	
12	
11	

b)



Input	Output
40	
36	
32	
28	
24	
20	
16	

2. Look at the tables of values in question 1. Write the pattern rule for each group of terms.

a) the output numbers in part a) _____

b) the input numbers in part b) _____



Determine the number that correctly fills in the blank in the function machine.

Answers

1)

Input	Output
36	37
55	
69	70
14	15
48	49

2)

Input	Output
31	21
74	64
94	84
95	85
18	

3)

Input	Output
3	
4	20
8	40
5	25
10	50

4)

Input	Output
18	
12	4
30	10
24	8
9	3

5)

Input	Output
55	70
29	44
	91
24	39
56	71

6)

Input	Output
103	
61	56
25	20
42	37
80	75

7)

In	3	5	10	2	8
Out	18	30	60	12	

8)

In		4	18	16	10
Out	7	2	9	8	5

9)

In		86	78	40	52
Out	59	92	84	46	58

10)

In	41	74	65	15	47
Out	28		52	2	34

11)

In	7	6		10	3
Out	49	42	56	70	21

12)

In	40	80	100	20	
Out	4	8	10	2	9

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

Practice

1. Complete the table of values for each Input/Output machine.

a)



Input	Output
93	
90	
87	
84	
81	

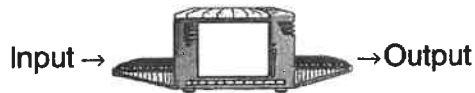
b)



Input	Output
305	
310	
315	
320	
325	

2. Look at the tables of values. Write the number and the operation in each machine.

a)



Input	Output
840	42
800	40
760	38
720	36
680	34

b)



Input	Output
11	143
20	260
29	377
38	494
47	611

Stretch Your Thinking

The table of values shows the Input/Output from a machine.

- Write the number and operation for the machine. _____
- Write the pattern rule for the input numbers.

- Write the pattern rule for the output numbers. _____

Input	Output
3456	1152
3531	1177
3606	1202
3681	1227
3756	1252

Patterns from Tables



Quick Review

This Input/Output machine divides each input by 2, then adds 3.

The pattern rule that relates the input to the output is: Divide the input by 2. Then add 3.

We can use this rule to predict the output for any input.

For an input of 70, the output is:

$$70 \div 2 + 3 = 38$$



Input	Output
20	13
30	18
40	23
50	28
60	33

Try These

- Each table of values shows the input and output from a machine with 1 operation. Write the number and the operation in each machine.

a)



Input	Output
2	4
4	8
6	12
8	16
10	20

b)



Input	Output
24	6
20	5
16	4
12	3
8	2

- Write the pattern rule that relates the input to the output for each table of values in question 1.

a) _____

b) _____

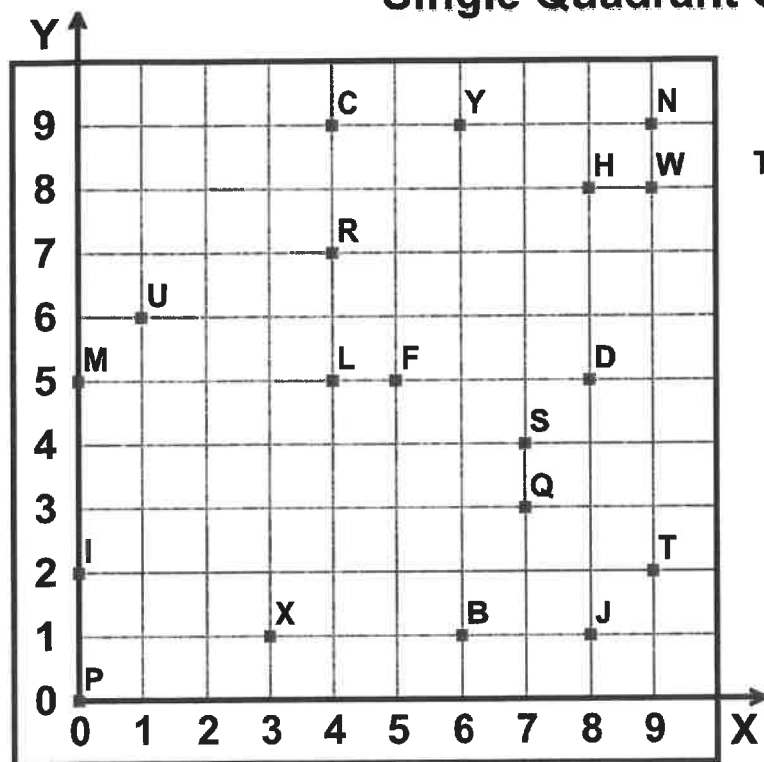
Name : _____

Score : _____

Teacher : _____

Date : _____

Single Quadrant Ordered Pairs



Tell what point is located at each ordered pair.

1) (1,6) _____ 6) (0,5) _____

2) (8,1) _____ 7) (4,7) _____

3) (7,4) _____ 8) (9,9) _____

4) (0,2) _____ 9) (7,3) _____

5) (4,9) _____ 10) (8,8) _____

Write the ordered pair for each given point.

11) T _____

14) P _____

17) F _____

12) D _____

15) Y _____

18) W _____

13) B _____

16) X _____

19) L _____

Plot the following points on the coordinate grid.

20) G (4,3)

22) Z (1,0)

24) O (5,9)

21) A (0,8)

23) K (9,7)

25) V (1,5)



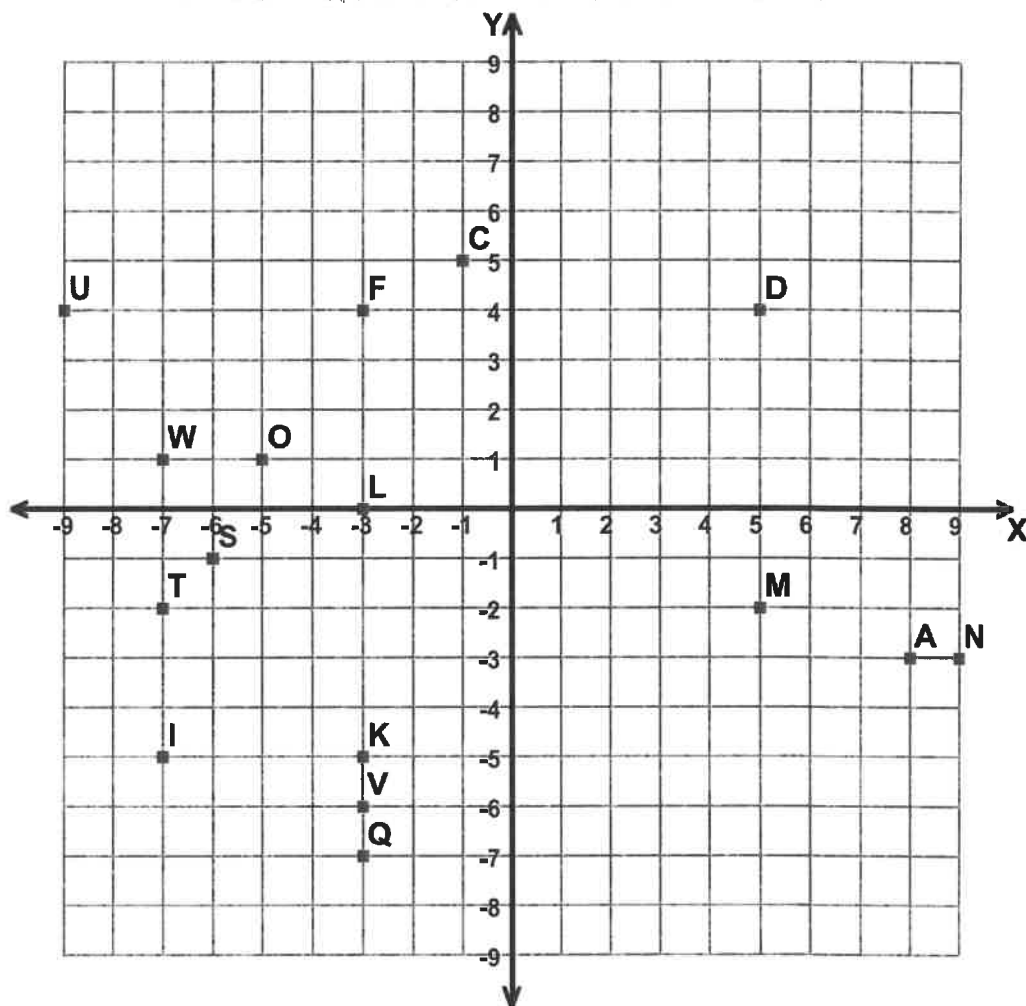
Name : _____

Score : _____

Teacher : _____

Date : _____

Four Quadrant Ordered Pairs



Tell what point is located at each ordered pair.

- | | | | |
|---------------------|---------------------|---------------------|---------------------|
| 1) $(+9, -3)$ _____ | 3) $(+5, -2)$ _____ | 5) $(+5, +4)$ _____ | 7) $(-3, -6)$ _____ |
| 2) $(-5, +1)$ _____ | 4) $(-7, +1)$ _____ | 6) $(-7, -5)$ _____ | 8) $(-3, +4)$ _____ |

Write the ordered pair for each given point.

- | | | | |
|-------------|-------------|-------------|-------------|
| 9) L _____ | 11) C _____ | 13) T _____ | 15) K _____ |
| 10) Q _____ | 12) A _____ | 14) U _____ | 16) S _____ |

Plot the following points on the coordinate grid.

- | | | | |
|------------------|------------------|------------------|------------------|
| 17) B $(-3, -8)$ | 19) P $(+7, +1)$ | 21) X $(-2, +2)$ | 23) G $(-9, +8)$ |
| 18) E $(+0, +0)$ | 20) H $(-8, +1)$ | 22) Z $(-8, +5)$ | 24) J $(+5, -7)$ |



Plotting Points on a Coordinate Grid



Quick Review

- We use an **ordered pair** to describe the **coordinates** of a point on a grid.

The coordinates of point A are (5, 7).

The **origin** is the point where the horizontal and vertical axes meet.

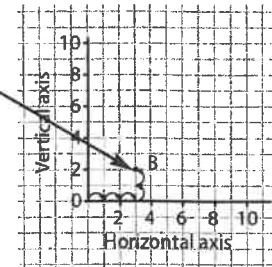
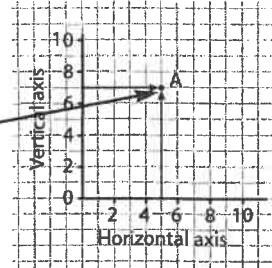
In an ordered pair:

- The first number tells the horizontal distance from the origin.
- The second number tells the vertical distance from the origin.

- The coordinates of point B are (3, 2).

To **plot** point B:

Start at 0, move 3 squares right, then move 2 squares up.



Try These

1. a) Name the letter on the grid represented by each ordered pair.

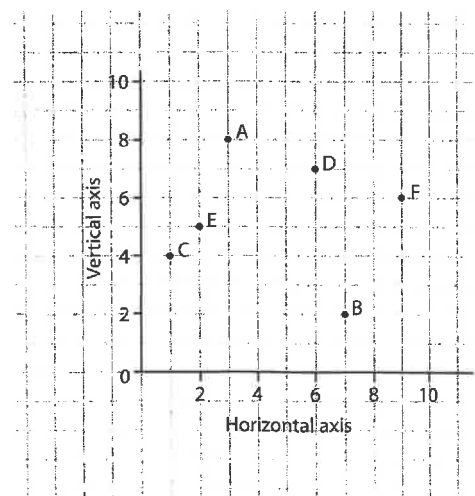
(2, 5) _____ (6, 7) _____ (1, 4) _____

(9, 6) _____ (7, 2) _____ (3, 8) _____

- b) Plot each point on the grid.

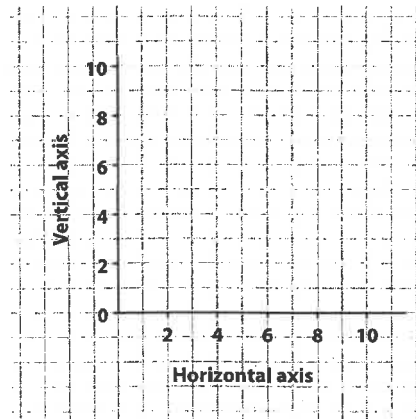
G(5, 4), H(10, 10), I(0, 9),

J(0, 2), K(8, 1), L(10, 4)



Practice

1. Plot each set of ordered pairs on the coordinate grid.
Join the points in order.
Join the last point to the first point.
Name each polygon you have drawn.
A: $(8, 6), (6, 6), (6, 8), (8, 8)$

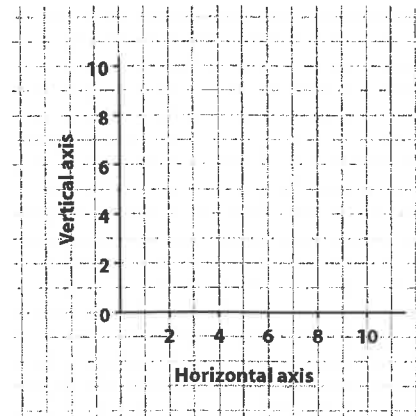


B: $(0, 3), (4, 0), (6, 0), (2, 3)$

C: $(1, 6), (1, 10), (4, 10), (4, 6)$

D: $(7, 1), (6, 3), (8, 5), (10, 3), (9, 1)$

2. Plot 6 points on the grid.
Label the points A to F.
Record the ordered pairs.



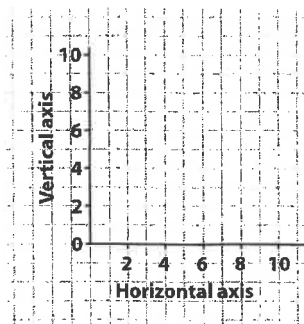
A: _____ B: _____

C: _____ D: _____

E: _____ F: _____

Stretch Your Thinking

- $(2, 5)$ and $(7, 5)$ are 2 vertices of a parallelogram with area 10 square units.
Plot the points for the 2 given vertices.
What are the coordinates of the other vertices?
Give as many answers as you can.



Drawing the Graph of a Pattern

Quick Review

Here are some ways to represent a pattern.

- Model the pattern on grid paper.

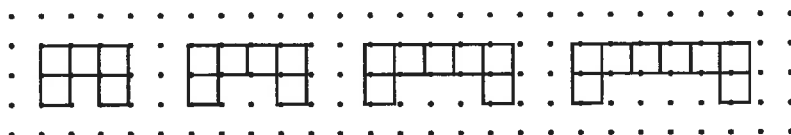


Figure 1

Figure 2

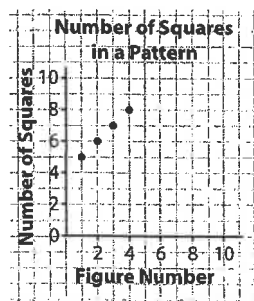
Figure 3

Figure 4

- Make a table.

Figure Number	Number of Squares	Ordered Pair
1	5	(1, 5)
2	6	(2, 6)
3	7	(3, 7)
4	8	(4, 8)

- Draw a graph.



Try These

1. Henry made this pattern.

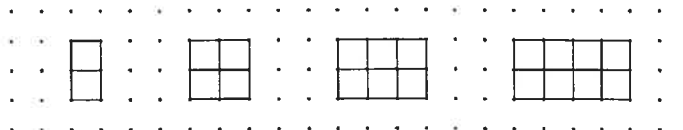


Figure 1

Figure 2

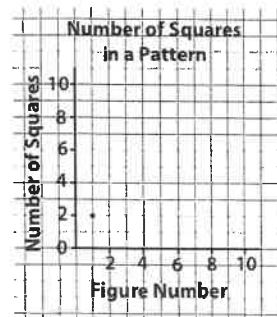
Figure 3

Figure 4

- a) Complete the table.

Figure Number	Number of Squares	Ordered Pair
1	2	(1, 2)

- b) Graph the pattern

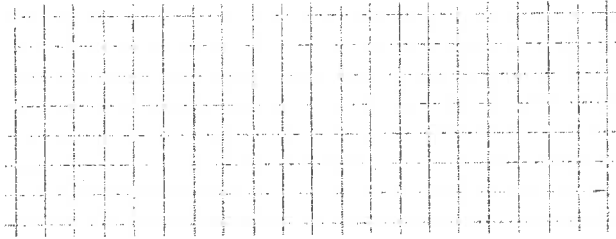


Practice

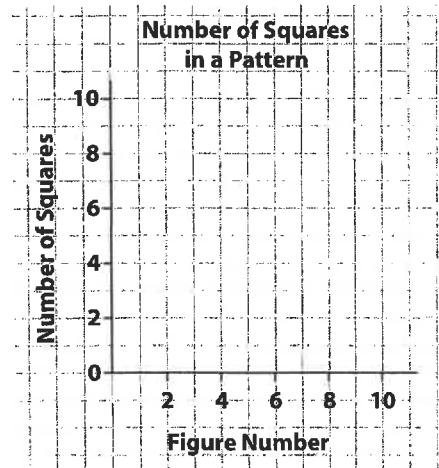
1. a) Describe the relationship shown in the table.

Figure Number	1	2	3	4	5
Number of Squares	1	3	5	7	9

- b) Draw squares on the grid to model the pattern.



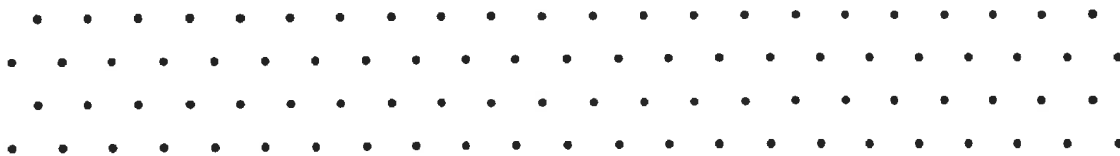
- c) Graph the pattern.
d) How many squares are needed for Figure 10?



- e) Which figure has 29 squares?
f) Which figure has 51 squares?

2. Draw a pattern to model the data in the table.

Figure Number	1	2	3	4
Number of Triangles	1	2	4	8



Stretch Your Thinking

Use the table in question 2.

How many triangles are in Figure 10? _____

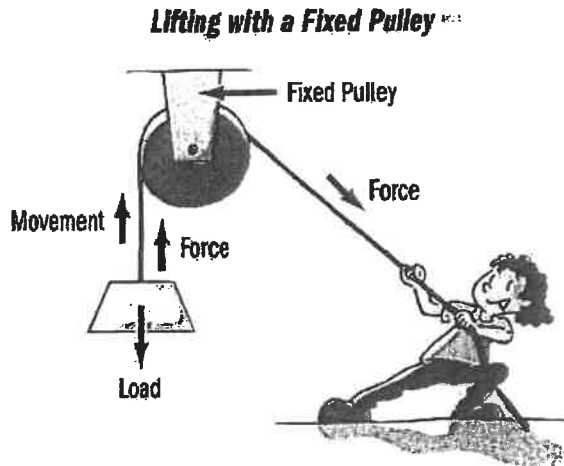
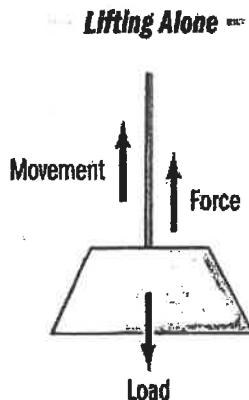
Which figure has 8192 triangles? _____

Name: _____

Date: _____

Pulleys

Use the pictures to help you complete the paragraphs by filling in the blanks with the words provided.



effort
fixed
force
one
down
direction
muscles
weight

If we want to move something, we need to apply a _____. We can use a _____ pulley system to do this. In a system like this, the pulley stays in _____ place. This system changes the _____ of the force needed to move something, not the amount of force.

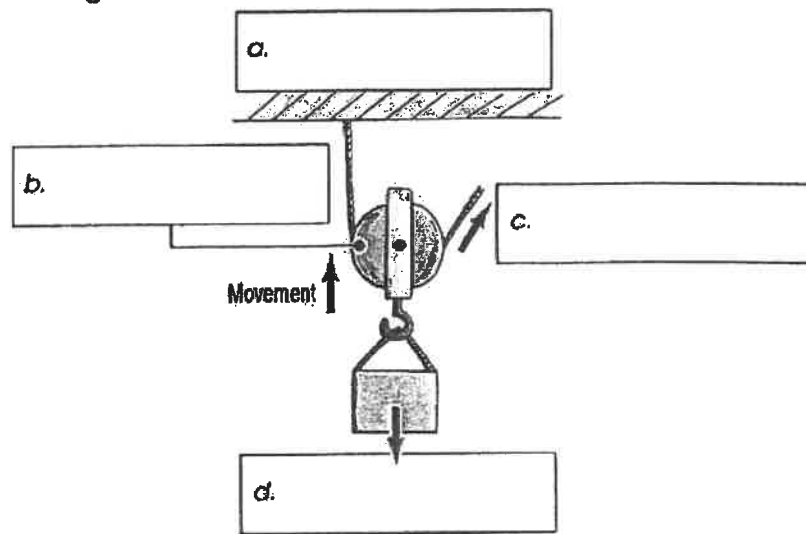
When we pull upwards to move something, we are pulling with our _____ alone. It is usually easier to pull something _____ rather than pull it up because we can use our _____ as an additional force. Our muscles lift the load with less _____.

After reading the paragraphs to follow label the picture by using the bolded words.

If the pulley is allowed to move, then lifting a load becomes easier. The force needed to move the load is called the **load force**.

A **movable pulley** supports and moves with the load. The pulley is attached to the load, and the rope is attached to the **structure**. This makes lifting the load easier because the rope attached to the structure takes half the weight of the load. You only have to use half the **effort force** that you would use with a fixed

pulley system. For example, to lift a 100 kg load, you would only have to use an effort force of 50 kg.



1. What is a load force?

2. What is an effort force?

3. How much effort force would you use to lift a 300 kg weight with a fixed pulley system?

4. How much effort force would you use to lift a 300 kg weight with a movable pulley system?

5. In a movable pulley system, where does the other effort come from?
