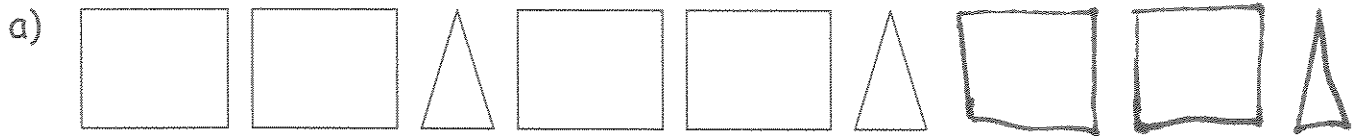


Name \_\_\_\_\_

Date \_\_\_\_\_

Lesson 1 - Introduction to Patterns  
Worksheet A

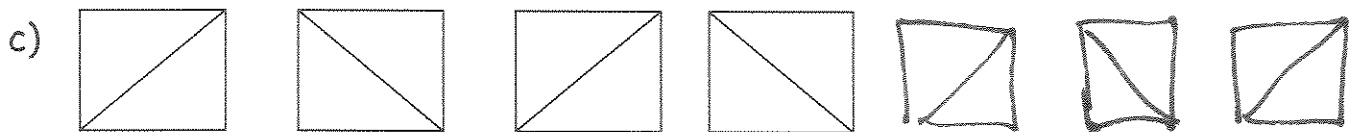
1. Complete each of the following patterns by writing or drawing the next 3 in the sequence. Write the pattern rule.



two rectangles followed by a triangle repeated

b) 4 4 5 5 6 6 7 7 8 8 9 9

Doubles of the numbers written in order.



The line in the rectangles goes opposite ways.

Name \_\_\_\_\_

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Lesson 1 - Introduction to Patterns  
Worksheet B

1. Complete the charts.

2	3	4	5
3	4	5	6
4	5	6	7
5	6	7	8

4	3	2	1
5	4	3	2
6	5	4	3
7	6	5	4

Name \_\_\_\_\_

Date \_\_\_\_\_

Lesson 1 - Introduction to Patterns  
Worksheet C

1. Look for a pattern and circle the next 3 numbers

a) 4, 5, 6, 7 8 9

1, 2, 3

8, 9, 10

7, 8

b) 7, 8, 9 10 11 12

10, 11, 12

9, 10, 11

11, 12, 13

c) 12, 13, 14 15 16 17

16, 17, 18

15, 16, 17

9, 10, 11

2. Color the grid below creating a pattern.

Answer may vary. For example:

Red	Blue	Red	Blue	Red
B	R	B	R	B
R	B	R	B	R
B	R	B	R	B
R	B	R	B	R

Name \_\_\_\_\_

Date \_\_\_\_\_

Lesson 1 - Introduction to Patterns

Worksheet D

1. Create a pattern sequence of 8 using either shapes, number, letters, colors, etc.

a) 1, 2, 3, 4, 5, 6, 7, 8

2. Create a pattern in the chart.

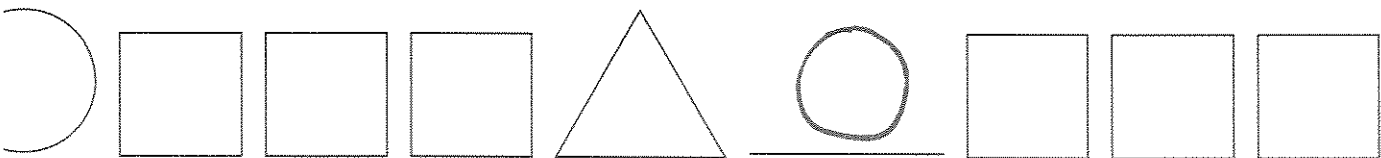
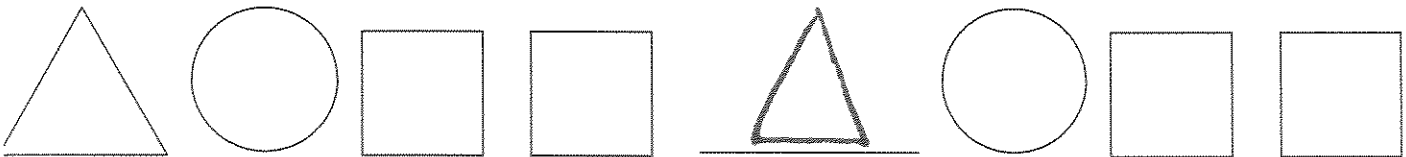
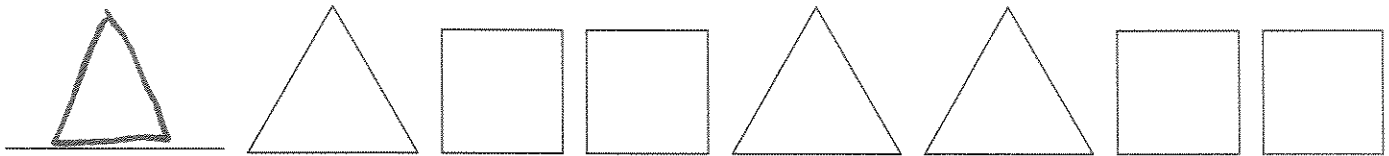
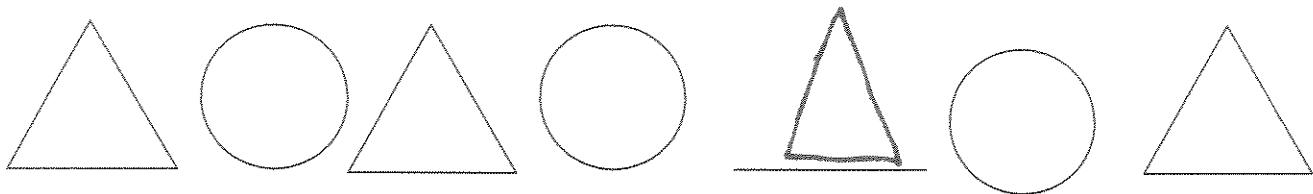
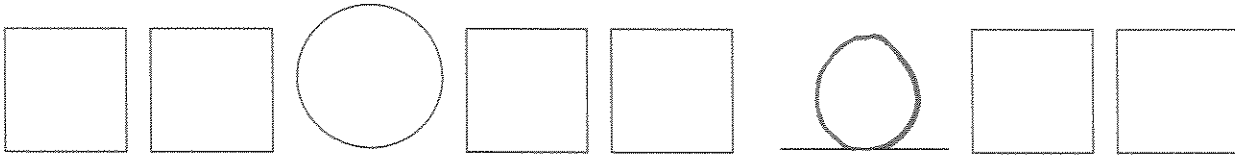
1	2	3	4	5
2	3	4	5	6
3	4	5	6	7
4	5	6	7	8

Name \_\_\_\_\_

Date \_\_\_\_\_

Lesson 2 - Identifying Patterns  
Worksheet A

1. Draw or write the missing piece to the pattern.

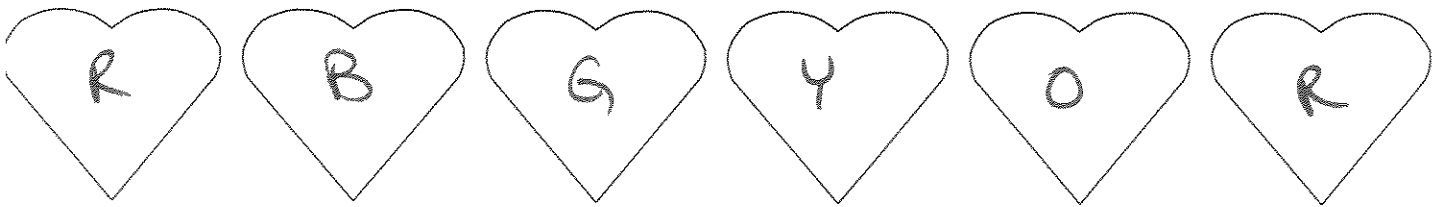
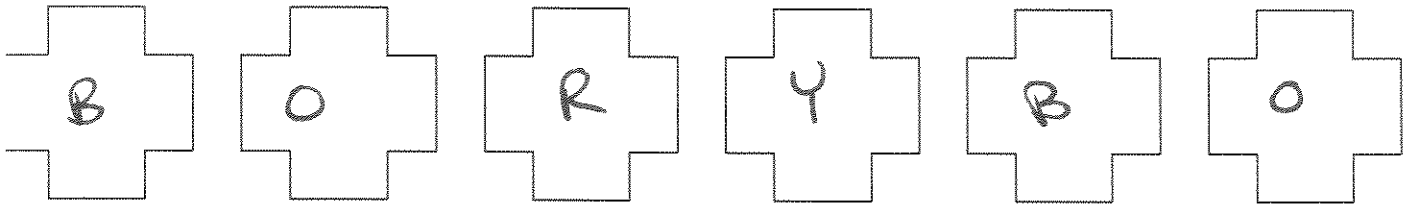
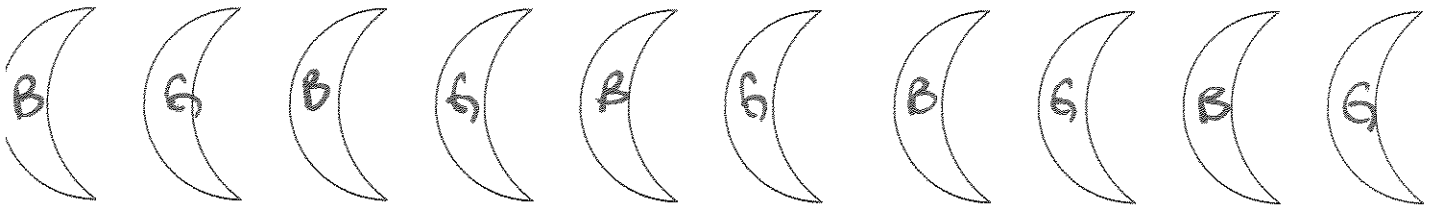
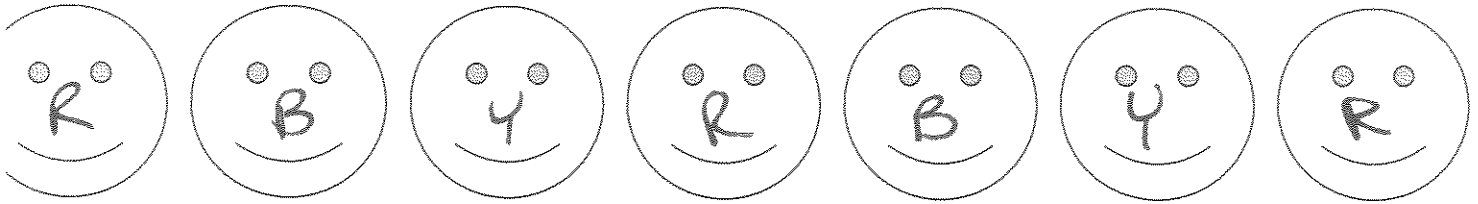


Name \_\_\_\_\_

Date \_\_\_\_\_

Lesson 2 - Identifying Patterns  
Worksheet B

1. Color to show a pattern



Name \_\_\_\_\_

Date \_\_\_\_\_

Lesson 4 - Reproduce Patterns  
Worksheet A

1. Make the same patterns using different letters, numbers or shapes.

A A BBB A A CCC A A

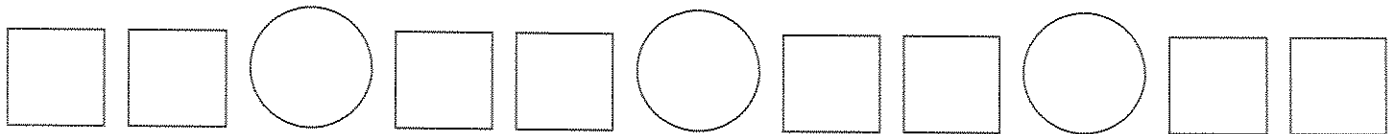
oo III oo --- oo

---

123 456 789

abc def ghi

---



♡♡ | ♡♡ | ♡♡ | ♡♡

---

Name \_\_\_\_\_

Date \_\_\_\_\_

Lesson 4 - Reproduce Patterns  
Worksheet B

1. Make a pattern with linking cubes and color it in the blocks.

Answers will vary. For example:

R	B	R	B	R	B	R	B	R	B	R
---	---	---	---	---	---	---	---	---	---	---

R	B	O	R	B	O	R	B	O	R	B
---	---	---	---	---	---	---	---	---	---	---

R	B	O	B	Y	B	R	B	O	B	Y
---	---	---	---	---	---	---	---	---	---	---

O	Y	B	Y	O	Y	B	Y	O	Y	B
---	---	---	---	---	---	---	---	---	---	---

O	G	B	O	G	B	O	G	B	O	G
---	---	---	---	---	---	---	---	---	---	---

Y	O	Y	O	R	Y	O	Y	O	R	Y
---	---	---	---	---	---	---	---	---	---	---

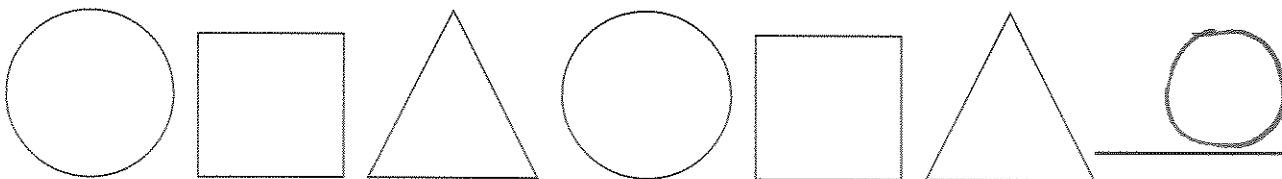
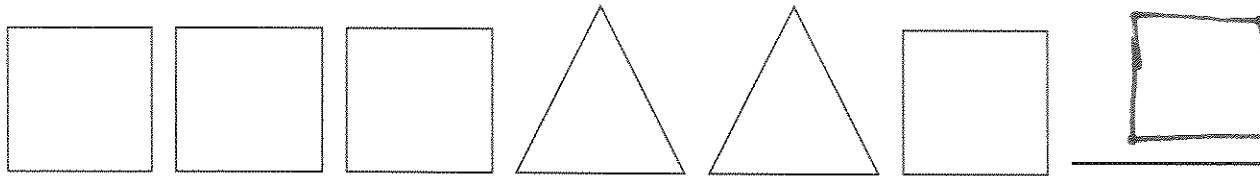
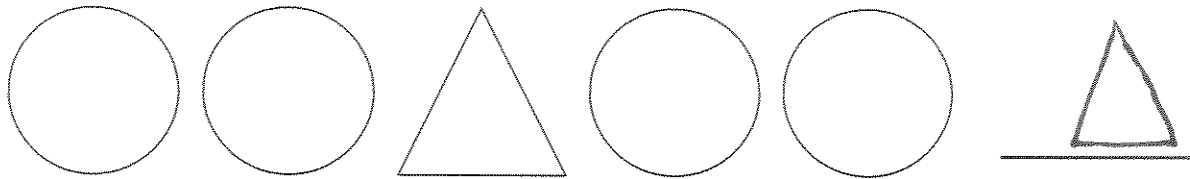
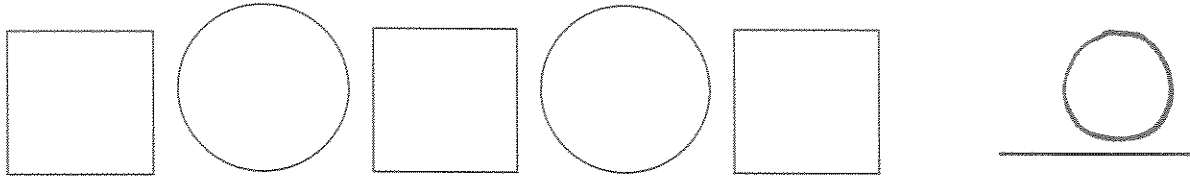


Name \_\_\_\_\_

Date \_\_\_\_\_

**Lesson 5 - Extending Patterns**  
**Worksheet A**

1. Draw the next shape in the pattern.



Name \_\_\_\_\_

Date \_\_\_\_\_

### Lesson 5 - Extending Patterns

#### Worksheet B

1. Write the next 3 letters in each pattern.

J K L M N O

P

Q

R

A B B B C B D B E

B

F

B

X Y Z A B C X Y Z A

B

C

X

Z A A Z B B Z C

C

Z

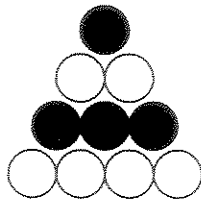
D

Name \_\_\_\_\_

Date \_\_\_\_\_

Lesson 5 - Extending Patterns  
Worksheet C

1. Kesler built the following pattern:



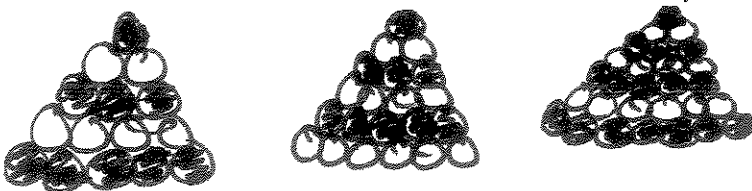
a) What is the name of the shape that Kesler is building?

triangle

b) What will Kesler do to continue the pattern?

add another row of circles to the bottom with an extra circle added.

c) Build the next 3 rows in Kesler's pattern.



d) How many counters are in each dark row?

1, 3, 5, 7

e) What other patterns do you see in this arrangement

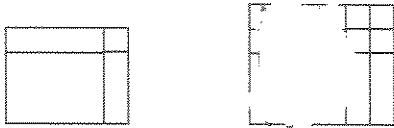
There is an extra counter in each bottom row.  
The black counters skip a row.

Name \_\_\_\_\_

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Lesson 5 - Extending Patterns  
Worksheet D

1. Easton built the following pattern:



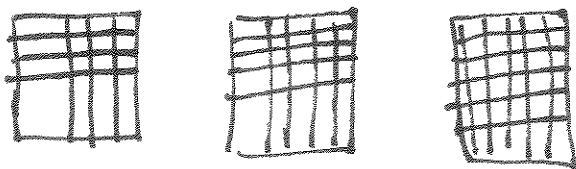
a) What is the name of the shape that Easton is building?

Square

b) What will Easton do to continue the pattern?

add vertical and horizontal lines.

c) Build the next 3 figures in Easton's pattern.



d) How many small rectangles are in the 5th figure?

36

e) What other patterns do you see in this arrangement?

The lines increase by 1 with each proceeding figure.

Name \_\_\_\_\_

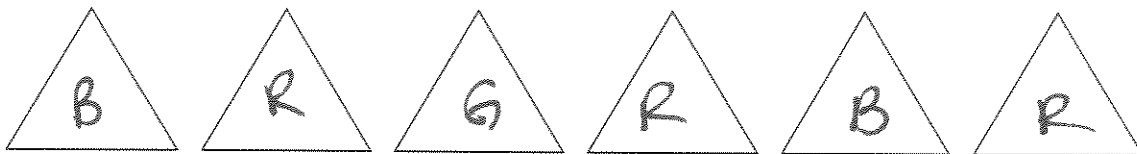
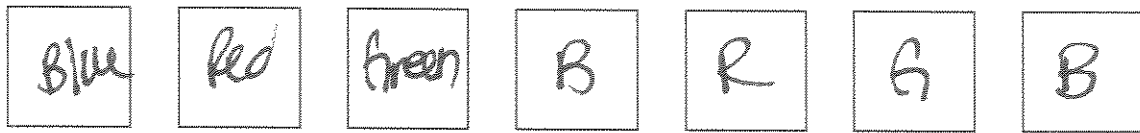
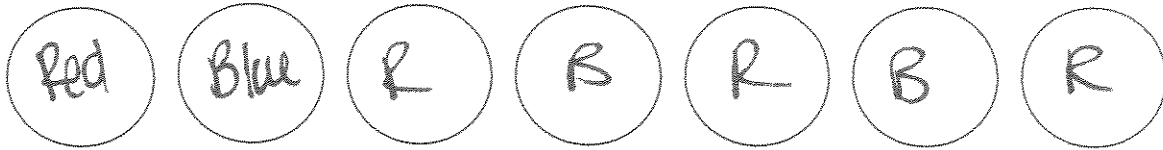
Date \_\_\_\_\_

Lesson 6 - Create Patterns

Worksheet A

Answers will vary. For example:

1. Create your own color patterns



2. Create your own patterns on the line using shapes, numbers letters or any other object that you would like to draw.



Name \_\_\_\_\_

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Lesson 6 - Create Patterns  
Worksheet B

Create your own pattern on the graph paper.

Answers will vary. For example

1	2	3	4	5
2	3	4	5	6
3	4	5	6	7
4	5	6	7	8



Name \_\_\_\_\_

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Lesson 6 - Create Patterns

Worksheet C

Answers will vary. For example:

1. Make a pattern using symbols.



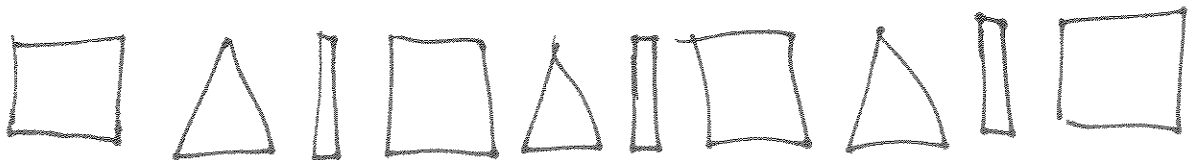
a) Represent this pattern using numbers.

1 2 3 1 2 3 1 2 3 1

b) Represent this pattern using letters.

abc abcabcabc

c) Represent this pattern using



Name \_\_\_\_\_

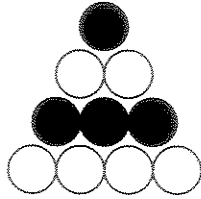
Date \_\_\_\_\_

### Lesson 7 - Translating Patterns

#### Worksheet A

Answers will vary. For example:

1. Look at the following pattern.



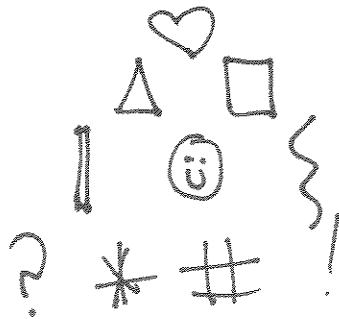
a) Represent this pattern using numbers.

1  
2 3  
4 5 6  
7 8 9 10

b) Represent this pattern using letters.

a  
b c  
d e f  
g h i j

c) Represent this pattern using symbols.





Name \_\_\_\_\_

Date \_\_\_\_\_

Lesson 7 - Translating Patterns  
Worksheet B

1. Look at the following pattern.

1  
1 2 1  
1 3 3 1  
1 4 6 4 1

a) Represent this pattern using numbers.

2  
2 3 2  
2 5 5 2  
2 7 10 7 2

b) Represent this pattern using letters.

a  
a b a  
a c c a  
a d e d a

c) Represent this pattern using symbols.

♡  
♡ 😊 ♡  
♡ △ △ ♡  
♡ § # § ♡

Name \_\_\_\_\_

Date \_\_\_\_\_

## Lesson 7 - Translating Patterns

### Worksheet C

Answers may vary. For example:

1. Look at the following pattern.

A B A A B B A A A B B B

a) Represent this pattern using numbers.

1 2 11 22 111 222

b) Represent this pattern using shapes.

♡ ○ ♡ ♡ ○ ○ ♡ ♡ ♡ ○ ○ ○

c) Represent this pattern using symbols.

# ! # # !! # # # !!!

Name \_\_\_\_\_

Date \_\_\_\_\_

## Lesson 7 - Translating Patterns

Worksheet D

Answers will vary. For example:

1. Make a pattern using symbols.



a) Represent this pattern using numbers.

1 2 1 1 2 2 1 1 1 2 2 2

b) Represent this pattern using letters.

a b a a b b a a a b b b

c) Represent this pattern using shapes.



Name \_\_\_\_\_

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Lesson 8 - Equalities and Inequalities  
Worksheet A

1. Circle the numbers that are equal.

$7 \neq 5$

$3 \neq 6$

$4 = 4$

$5 \neq 9$

$8 = 8$

$7 \neq 6$

2. Circle the number that is bigger.

$1 \neq 3$

$4 \neq 7$

$2 \neq 6$

$9 \neq 5$

$7 \neq 1$

$2 \neq 3$

14. Circle the number that is smaller.

$1 \neq 3$

$4 \neq 7$

$2 \neq 6$

$9 \neq 5$

$7 \neq 1$

$2 \neq 3$

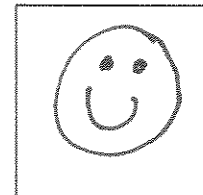
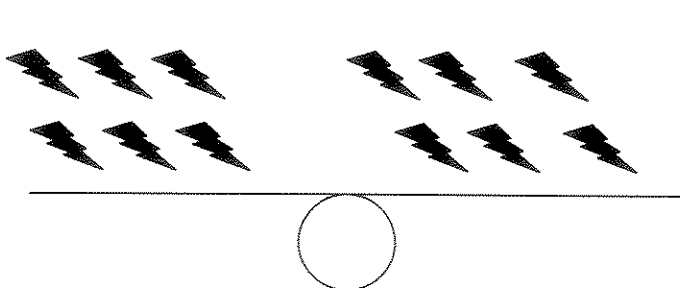
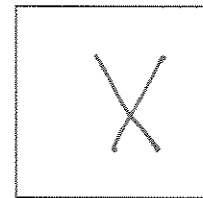
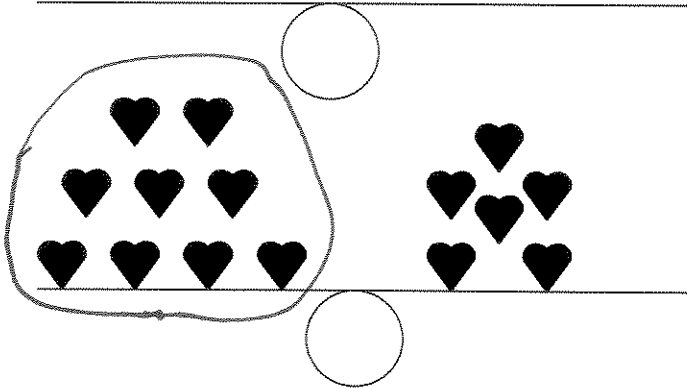
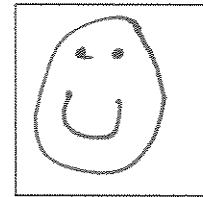
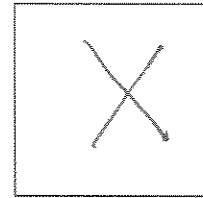
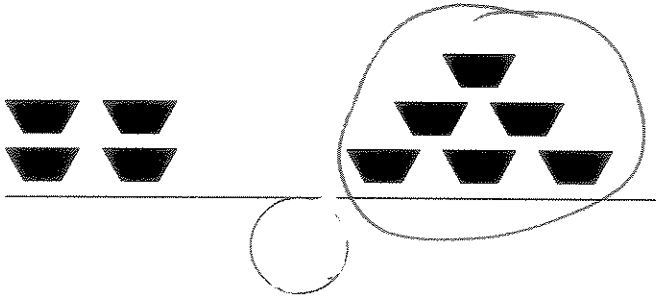
Name \_\_\_\_\_

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## Lesson 8 - Equalities and Inequalities

### Worksheet B

1. Put an X in the box if it is not equal and an ☺ if they are equal.  
Circle the side that should tip if it is not equal.



Name \_\_\_\_\_

Lesson 9- Problem Solving

Date \_\_\_\_\_

Worksheet A

Look at the following number pattern. Complete the pattern using the problem solving process.

140      150      160      170    180    190

Step 1 - What are the key numbers?

140, 150, 160

Step 2 - What is your plan?

to add 10 to the numbers.

Step 3 - Number Sentence and Answer

$140 + 10 = 150$      $150 + 10 = 160$      $160 + 10 = 170$

Step 4- Write a sentence to answer the problem.

Add 10 to the numbers to make a Pattern.

Step 5 - Check your answer

$170 - 10 = 160$ .

Name \_\_\_\_\_

## Lesson 9 - Problem Solving

Date \_\_\_\_\_

### Worksheet B

Look at the following pattern. Complete the pattern using the problem solving process.



Step 1 - What are the key numbers?

1, 2, 3.

Step 2 - What is your plan?

I will color 4 squares after the 3 colored squares

Step 3 - Number Sentence and Answer

$$1+1=2 \quad 2+1=3 \quad 3+1=4$$

Step 4- Write a sentence to answer the problem.

If you color 1, then 2, then 3 squares and continue it makes a pattern.

$$4-1=3$$

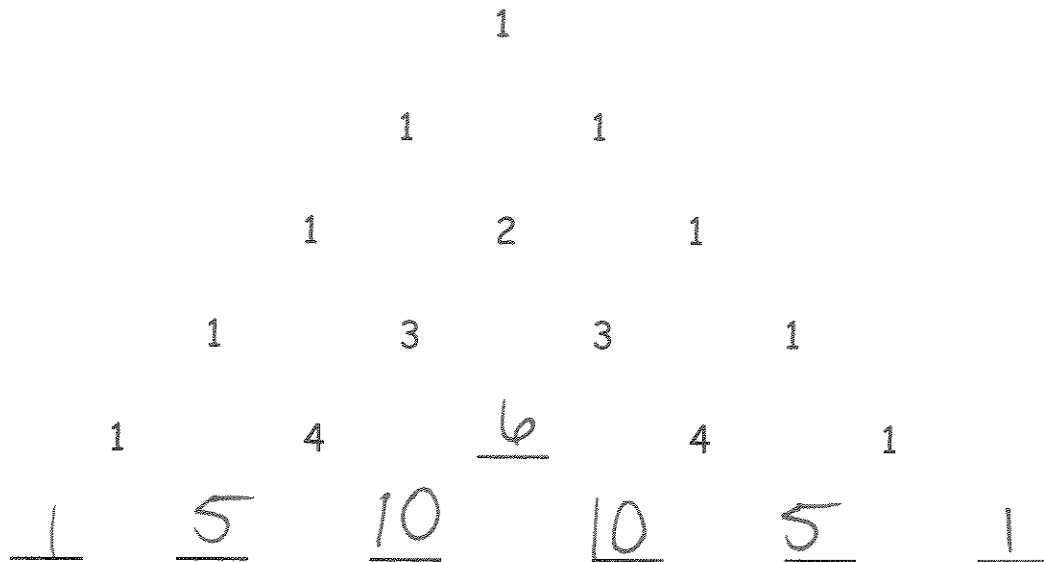
$$3-2=1$$

Name \_\_\_\_\_

Lesson 9 - Problem Solving  
Worksheet C

Date \_\_\_\_\_

This is Pascal's Triangle. What would come next in this pattern?



Step 1 - 1, 2, 3, 4

Step 2 - I will put the sum of the numbers underneath them.

Step 3 -  $1 + 4 = 5$     $4 + 6 = 10$     $3 + 3 = 6$

Step 4 - If you put the sum of the numbers underneath them it makes a pattern.

Step 5 -  $10 - 6 = 4$     $5 - 4 = 1$     $6 - 3 = 3$



Name \_\_\_\_\_

Lesson 9 - Problem Solving

Date \_\_\_\_\_

Worksheet D

Using the all of the following numbers, create a number sentence to get the answer of 5. Hint: Only use addition and subtraction.

1      1      2      2      5

Step 1 -

1, 2, 5, 1, 2

Step 2 - I will use addition and subtraction to find the answer.

Step 3 -  $1 + 2 - 2 - 1 + 5 = 5$

Step 4 - The answer was  $1 + 2 - 2 - 1 + 5 = 5$ .

Step 5 -  $5 - 1 = 5$

$3 - 3 = 0$