

Name: _____

Start date: _____


Hand in date: _____

Mark: _____

Math 8 K&E

Numbers & Patterns

Number and Patterns

Unit: Number and Patterns	I Can	Do 
1. Relationship between percents and decimals	I can change percents to decimals.	Practice: p. 41 (1–20, odds) Mathpower 8: p. 27
2. Relationship between decimals and percents	I can change decimals to percents.	Practice: p. 41 (1–20, evens) Mathpower 8: p. 27
3. Patterns and relationships	I can identify, describe, make predictions and represent a rule for patterns and relationships.	Practice: pp. 43–45 Mathpower: p. 9
4. Assessment		Unit Test: pp. 47–48

↳ NOTES:

I can... change percents to decimals.

Step 1 ➤ Look at the percent and identify where the decimal is in the number.

Hint: When you cannot see a decimal, it is **always** at the end of the number.

28 %

Decimal

Step 2 ➤ Move the decimal two places to the left.

.28 %

Step 3 ➤ If there are no numbers in front (to the left) of the decimal, add the number zero in front (to the left) of the decimal.

0.28 %

Step 4 ➤ Take away the percent sign at the end.


0.28

NOTES:


I can... change decimals to percents.

Step 1 ➤ Look at the decimal and identify where the decimal is in the number.

Hint: When you cannot see a decimal, it is **always** at the end of the number.

Decimal  1.51

Step 2 ➤ Move the decimal **two places to the right**.

 1.51.

Step 3 ➤ If there are numbers in front (to the right) of the decimal, write them down. If there aren't any numbers after (to the right) of the decimal, take away the decimal.

151

Step 4 ➤ Add a percent sign at the end.

151%

**Practice: Decimals and Percents**

Fill in the chart.

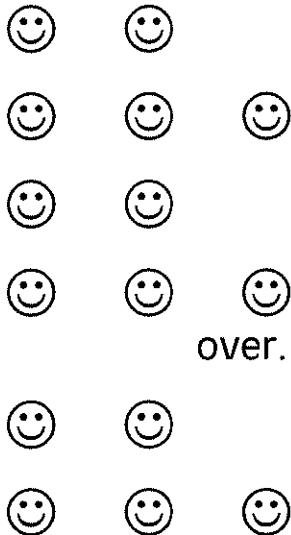
Question	Decimal	Percent
Example	0.42	42%
1.		15%
2.	0.31	
3.		70%
4.	0.02	
5.		22%
6.	0.50	
7.		84%
8.	0.09	
9.		8%
10.	0.66	
11.		68%
12.	0.250	
13.		100%
14.	0.015	
15.		91%
16.	2	
17.		13%
18.	0.825	
19.		124%
20.	0.4	

📌 NOTES:

Patterns...What is a Pattern?

A pattern is something that happens over and over.

Look at the example below.



The design repeats itself over and over.

Patterns also occur in your own life. Summer – school – summer – school. This pattern repeats itself until you finish school.

What other patterns can you think of?



Practice: Using Patterns 1 of 3

What comes next?

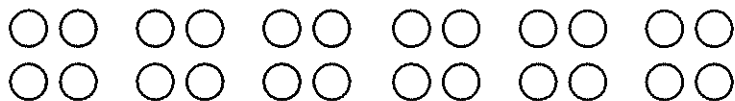
1. 2, 4, 6, 8, _____, _____, _____, _____, _____

2. 5, 10, 15, 20, _____, _____, _____, _____, _____

3. 1, 4, 8, 13, _____, _____, _____, _____, _____

4. Fill in the next boxes.

5. Complete the pattern.



6. Complete the tables.

2	6
4	12
6	
8	
10	

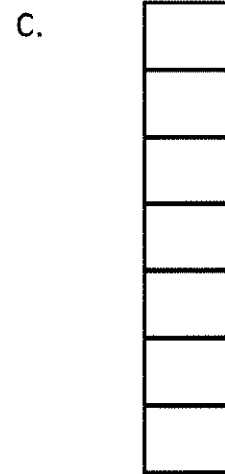
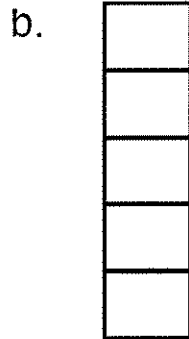
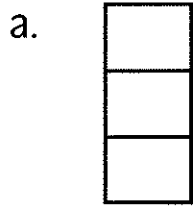
3	9
4	10
5	
6	
7	



Name: _____ Date: _____

Practice: Using Patterns 2 of 3

7. What will the next two towers look like? Draw them.



d.

e.

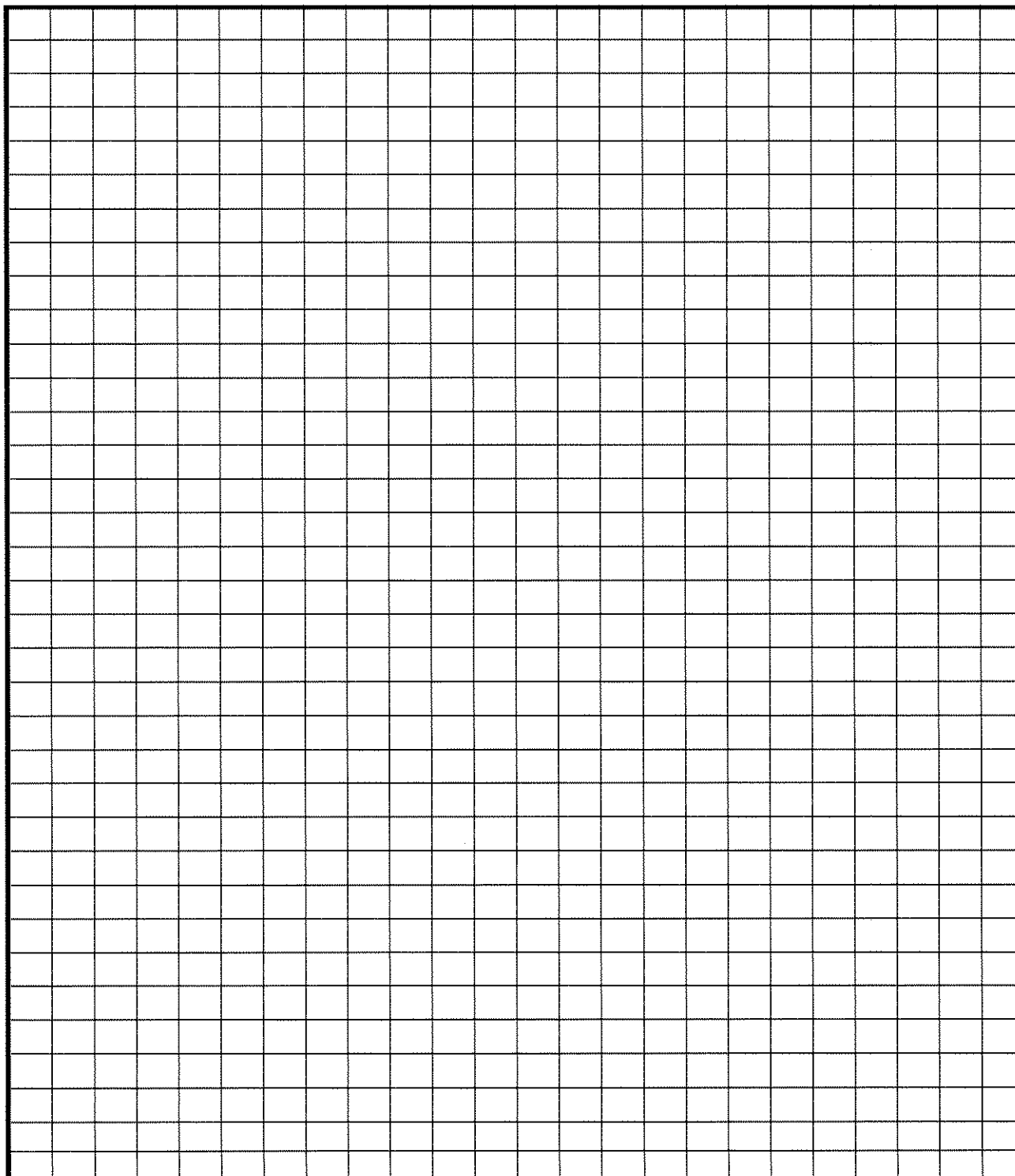
Name: _____ Date: _____



Practice: Using Patterns 3 of 3

Get Creative!

Instructions: Create your own design using a pattern.





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Practice: Problem Solving with Patterns

A pattern is a regular, systematic repetition. A pattern may be numerical, visual, or behavioural. By identifying the pattern, you can predict what will “come next” and what will happen again and again in the same way. Looking for patterns is a very important strategy for problem solving, and is used to solve many different kinds of problems. Sometimes you can solve a problem just by recognizing a pattern, but often you have to extend a pattern to find a solution. Making a number table often reveals patterns, and for this reason, is frequently used in conjunction with the “look for a pattern” strategy.

When looking for patterns:

- 1 – Understand the problem
- 2 – Think of a plan
- 3 – Carry out the plan
- 4 – Look back to make sure the answer makes sense

Examples: Look for a pattern to help you fill in the rest of the charts.

2	6
3	8
5	
6	

4	0
5	1
8	
	6

6	2
9	3
	5
24	
	10

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Number and Patterns – Unit Test

1. Change each decimal to a percent.

- a. 0.15 _____
- b. 0.38 _____
- c. 0.01 _____
- d. 0.05 _____
- e. 2.13 _____
- f. 0.75 _____
- g. 0.08 _____
- h. 1.16 _____
- i. 0.47 _____
- j. 0.03 _____

2. Change each percent to a decimal.

- a. 60% _____
- b. 5% _____
- c. 35% _____
- d. 438% _____
- e. 3% _____
- f. 20% _____
- g. 72% _____
- h. 56% _____
- i. 9% _____
- j. 125% _____

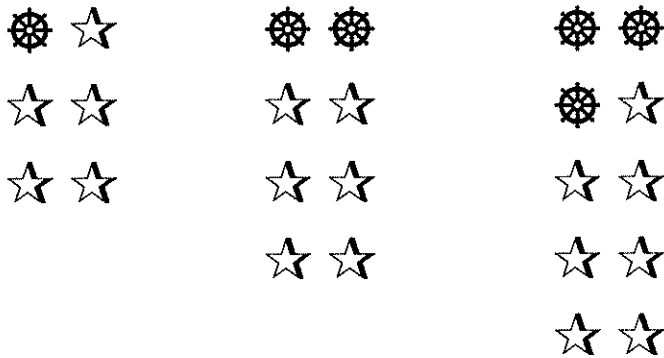
3. Fill in the next pattern.

a. 3, 6, 9, _____, _____, _____, _____, _____

b.

2	3	4	5			
3	2	7				

4. Draw the next two patterns.



5. Finish the table.

2	8
3	12
4	

6. Finish the table.

30	29
29	27
28	25