Name: _____ *Date:* _____

Grade 6 Summative Review Questions:

Content Area	Outcome	Questions			Readiness
Place value – Decimals	(N1)	p. 91 #4	p. 91 #6	p. 118 #1	
Place value – Millions	(N1)	p. 48 #6	p. 49 #7	p. 50 # 12	
Integers	(N7)	p. 81 #9	p. 81 #7	p. 81 #11	
Fractions	(N4)	p. 168 #1	p. 195 #9	p. 175 #11	
Ratio	(N5)	p. 179 #7	p. 179 # 10	p. 183 #9	
Percent	(N6)	p. 189 #8	p. 188 #6	p. 188 # 1	
Factors	(N3)	p. 65 #1	p. 66 # 9	p. 66 #10	
Multiples	(N3)	p. 57 #6	p. 57 #8	p. 57 #10	
Prime/Composite	(N3)	p. 62 #12	p. 62 #15	p. 83 #7	
Decimals ×	(N8)	p. 97 #4	p. 98 #10	p. 118 #7	
Decimals ÷	(N8)	p. 106 #4	p. 114 #4	p. 119 #12	
Angles	(SS1)	p. 127 #1	p. 129 #5	p. 141 #5	
Polygons	(SS5)	p. 216 #2	p. 222 #2	p. 240 #3	
Area	(SS3)	p. 233 #3	p. 234 #4	p. 234 #10	
Perimeter	(SS3)	p. 229 # 3a	p. 230 # 6c	p. 230 # 9b	
Volume	(SS3)	p. 237 # 1c	p. 237 #5	p. 237 #7	
Table of Values	(PR1)	p. 9 #4	p. 9 #6	p. 14 #2	
Patterns	(PR2)	p. 22 #1	p. 32 #4	p. 32 #5	
Line Graphs	(SP1)	p. 262 #5	p. 266 #5	p. 265 #2	
Large Numbers	(N2)	p. 53 #1	p. 53 #6	p. 54 #9	
Equations	(PR3)	p. 23 #6	p. 233 #2	p. 234 #8	
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Order of Operations	(N9)	p. 72 #6	p. 73 #12	p. 73 #11	
Triangles	(SS4)	p. 211 # 1a	p. 211 #1c	p. 212 #3b	
Interior Angles - Triangles	(SS2)	p. 148 #4	p. 148 #2	p. 149 #8	
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Collecting Data	(SP2)	p. 251 #5	p. 258 #4	p. 284 #3	
Graphing Data	(SP3)	p. 269 #2	p. 270 #4	p. 285 #6	
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Transformations - Combinations	(SS6)	p.306 #3	p.307 #5	p.311 #3	
Design with transformations	(SS7)	p.315 #1	p.316 #3	p.323 #7	
Plotting points	(SS8)	p.27 #4	p.28 #8	p.294 #6	
Transformations on a plane	(SS9)	p.299 #3	p.299 #4	p.300 #6	

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(N1) Place Value - Decimals

Page 91 # 4

4. Write each number in standard form.

a) 8 and 26 ten-thousandths

b) 24 millionths

c) 3 hundred-thousandths

d) 4 and 374 millionths

Page 91 # 6

6. Write a decimal that is between:

a) 2.153 and 2.154

b) 0.6534 and 0.6535

Page 118 # 1

1. Write each number in standard form.

a) 2 and 12 ten-thousandths

b) 7 millionths

c) 16 and 46 hundred-thousandths

d) 1 and 51 millionths

Name: _____ *Date:* _____

(N1) Place Value - Millions

Page 48 # 6

6. China is the most populated country in the world. In 2007, it had an estimated population of one billion three hundred twenty-one million eight hundred fifty-one thousand eight hundred eighty-eight.
Write this number in standard form and in expanded form.

Standard form: _____

Expanded form: _____

_____

_____

Page 49 # 7

7. The largest known prehistoric insect is a species of dragonfly.
It lived about 280 000 000 years ago.
Write this number in words.



_____

_____

Page 50 # 12

12. The table shows estimates of the populations of some cities in 2015.
Order the cities from least to greatest expected population.

City	Expected Population in 2015
Dhaka (Bangladesh)	22 766 000
Mumbai (India)	22 577 000
Tokyo (Japan)	27 190 000



Name: _____ Date: _____

_____

(N7) Integers

Page 81 #9

9. Order the integers in each set from least to greatest.

a) +5, −5, +4, +2, −2

_____

b) −8, −12, +10, 0, −10

_____

c) +41, −39, −41, −15, −25

_____

d) +1, −1, +2, −2, +3

_____

Page 81 #7

7. Copy and complete by placing <, >, or = between the integers. Then, use a number line to verify your answer.

a) +5 ☐ +10 b) −5 ☐ −10 c) +5 ☐ 5 d) −6 ☐ 0

e) −5 ☐ −4 f) 10 ☐ −11 g) −8 ☐ −4 h) −8 ☐ −8

Page 81 #11

11. On January 16, 2008, these temperatures were recorded in Canada.

Place	Temperature	Place	Temperature
Lethbridge, AB	–16°C	Iqaluit, NU	–29°C
La Ronge, SK	–27°C	Dawson City, YT	–26°C
Hay River, NWT	–29°C	Prince George, BC	–6°C
Campbell River, BC	0°C	Ste. Rose du Lac, MB	–17°C

Which was the warmest? _____

Name: _____ *Date:* _____

Which was the coldest? _____

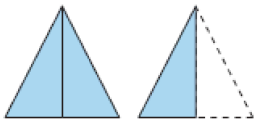
How did you find out? _____

(N4) Fractions

Page 168 # 1

1. Write an improper fraction and a mixed number to describe each picture.

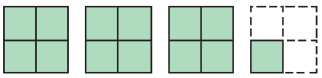
a)



Improper fraction:

Mixed number:

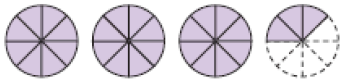
b)



Improper fraction:

Mixed number:

c)



Improper fraction:

Mixed number:

Page 195 # 8 (not # 9)

8. Place the numbers in each set on a number line.
Show your work. List the numbers from least to greatest.

a) $\frac{9}{2}, 2\frac{1}{6}, \frac{2}{3}$

b) $\frac{7}{2}, 3\frac{1}{4}, \frac{3}{4}$

c) $\frac{7}{20}, 1\frac{1}{4}, \frac{15}{10}$

Page 175 # 11

11. Ratu, Addie, and Penny cooked pancakes for their school's maple syrup festival in McCreary, Manitoba.
Ratu made $4\frac{1}{2}$ dozen pancakes,
Addie made $\frac{28}{6}$ dozen pancakes,
and Penny made $\frac{13}{3}$ dozen pancakes.

Who made the most pancakes? _____



McCreary is the maple syrup capital of Manitoba.

Name: _____ *Date:* _____

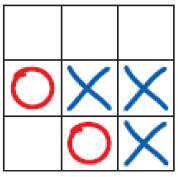
Who made the least pancakes? _____

Sketch a number line to show how you know:

(N5) Ratios

Page 179 #7

7. Write 4 different ratios for this picture.
Explain what each ratio compares.



a) ___: ___ , _____to _____ b) ___: ___ , _____to _____

c) ___: ___ , _____to _____ d) ___: ___ , _____to _____

Page 179 # 10

10. Write as many ratios as you can for the trail mix recipe.
Explain what each ratio compares.





Ratio: = What it compares:

Page 183 #9

9. Su Mei's recipe for bean salad calls for 3 cans of lima beans, 2 cans of pinto beans, and 1 can of kidney beans.
Su Mei is making bean salad for her family reunion.
Suppose she uses 9 cans of lima beans.

Name: _____ *Date:* _____

How many cans of pinto beans will she use? _____

How many cans of kidney beans will she use? _____

(N6) Percent

Page 189 # 8

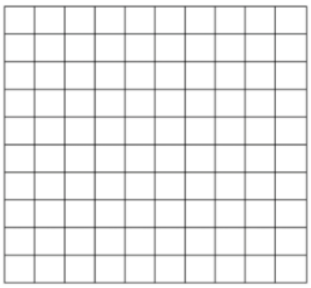
8. Write as a percent. Then write as a decimal.

a) 64 out of 100 _____ b) $\frac{50}{100}$ _____

c) 1 out of 100 _____ d) $\frac{17}{100}$ _____

Page 188 # 6

6. a) Use a hundredths grid. Colour 20% red, 13% blue, 32% green, and 23% yellow.



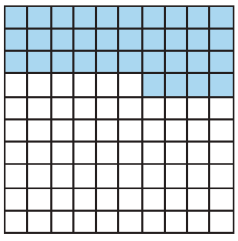
b) Write a fraction to describe the part of the grid that is each colour.

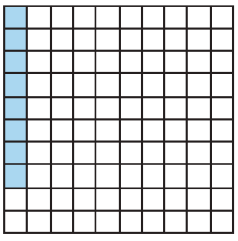
c) Write a decimal and a percent to describe the part of the grid that is not coloured.

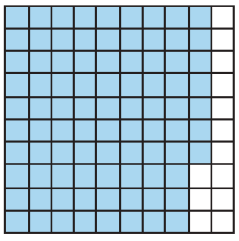
Page 188 # 1

1. Write: • a fraction with hundredths • a decimal • a percent

to name the shaded part of each grid.

a) 

b) 

c) 

Name: _____ *Date:* _____

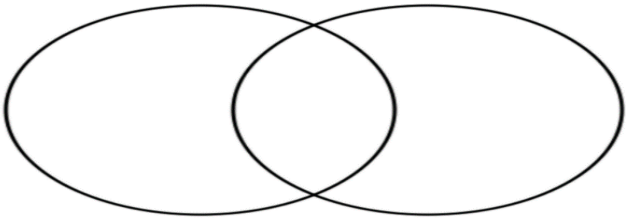
Fraction: _____	**Fraction:** _____	**Fraction:** _____
Decimal: _____	**Decimal:** _____	**Decimal:** _____
Percent: _____	**Percent:** _____	**Percent:** _____

(N3) Factors

Page 65 # 1

1. Use a Venn diagram. Show the factors of 18 and 24.

What are the common factors of 18 and 24?



Page 66 # 9

9. Patan uses a bead loom to make a bracelet.
She wants to use all 84 beads, and to put the beads in rows of equal length.
Patan also wants the number of beads in each row to be a factor of 84 that is a prime number.
How many beads could Patan put in each row?
Give as many answers as you can.
Explain how you found the numbers.



Bead Loom

Page 66 #10

10. Julia and Sandhu bought packages of granola bars.
Each package has the same number of bars.
a) Julia and Sandhu each had a total of 12 bars.
How many bars could there be in one package?

b) Suppose Julia had 24 bars and Sandhu had 18 bars.
How many bars could there be in one package?
Draw a picture to show your thinking.

Name: _____ *Date:* _____

(N3) Multiples

Page 57 # 6

6. Find the first 3 common multiples of each set of numbers. Which is the least common multiple? Explain your work.

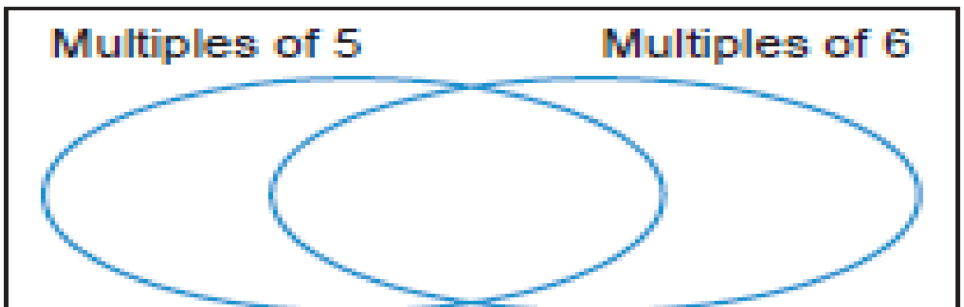
a) 3, 4, and 6 **b)** 2, 3, and 4 **c)** 4, 5, and 10

Page 57 # 8

8. Two TV movies start at 8:00 P.M.
One channel airs commercials every 6 min.
The other channel airs commercials every 9 min.
When will the two channels start commercial breaks at the same time?

Page 57 # 10

10. Sort these numbers.
45, 24, 52, 30, 66, 15, 85, 90, 72, 60, 20, 38
What can you say about the numbers in the overlap?



Name: _____ *Date:* _____

(N3) Prime / Composite

Page 62 #12

12. How can you tell that 32 and 95 are not prime numbers without finding their factors?

Page 62 #15

15. Copy this Carroll diagram.

	Prime	Composite
Even		
Odd		

Sort the numbers from 2 to 30.

Page 83 #7

7. Tell if each number is prime or composite. How do you know?

a) 18 is (prime/composite) because _____

b) 21 is (prime/composite) because _____

Name: _____ *Date:* _____

c) 48 is (prime/composite) because _____

d) 37 is (prime/composite) because _____

(N8) Multiplication of Decimal Numbers

Page 97 # 4

4. Multiply.

a) 8.2×4 b) 1.02×6 c) 5.9×2

d) 6.112×3 e) 3.525×7 f) 5.354×6

Page 98 # 10

10. a) Akuna sold three 1.375-L bottles of birch syrup to raise money for his school in Hay River.
Did Akuna sell more or less than 4 L of syrup?
How much more or less? Explain how you know.

b) Akuna sold each bottle of syrup for $74.79.
How much money did he raise?

Page 118 # 7

7. Multiply. Estimate to place the decimal point.

a) 0.321×6 b) 0.0249×5 c) 0.0043×7

Name: _____ *Date:* _____

(N8) Division of Decimal Numbers

Page 106 # 4

4. Divide. Multiply to check your answers.

a) $27.025 \div 5$ b) $3.42 \div 6$ c) $7.735 \div 7$

d) $16.072 \div 8$ e) $30.9 \div 5$ f) $3.438 \div 6$

Page 114 # 4

4. a) A typical hamster eats 0.084 kg of food a week. About how much food does a hamster eat in one day?



b) Jiri's hamster was put on a special diet. Over 5 days, his hamster ate about 0.054 kg of food. About how much food did Jiri's hamster eat in one day?

Page 119 # 12

12. Divide.

a) $24.15 \div 6$ b) $\$31.87 \div 8$ c) $9.3 \div 6$

Name: _____ Date: _____

d) 14.523 L ÷ 4 e) 3.5 m ÷ 9 f) $11.68 ÷ 9

(SS1) Angles

Page 127 #1

1. Which angle is an acute angle? A right angle? An obtuse angle? A straight angle? A reflex angle?

a) 

b) 

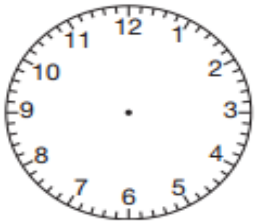
c) 

d) 

e) 

Page 129 #5

5. a) For each time below, which type of angle is formed by the hour hand and minute hand on a clock? How did you find out?
   - i) 2:15
   - ii) 3:35
   - iii) 9:00
   - iv) 12:30
   - v) 1:45

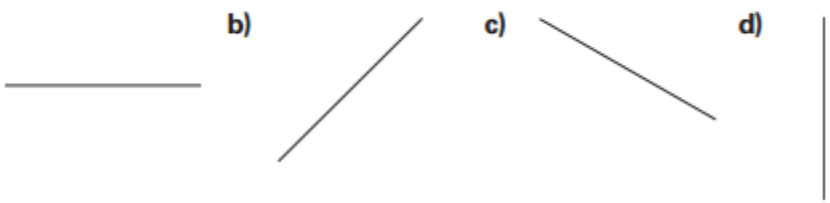


   b) Would the size of each angle change if the minute hand was shorter? Justify your answer.

Page 141 #5

5. Copy these line segments. Use a ruler and a protractor. Using each line as one arm, draw a 50° angle. Label each angle with its measure. How did you decide which scale to use?

a) b) c) d)



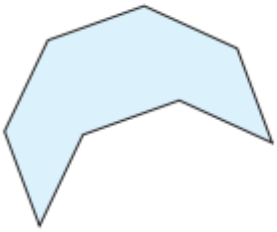
Name: _____ *Date:* _____

(SS5) Polygons

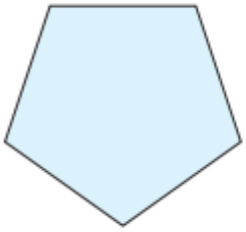
Pg. 216 #

2. Is each polygon regular? How do you know?

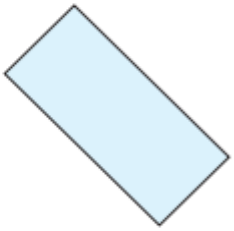
a)



b)

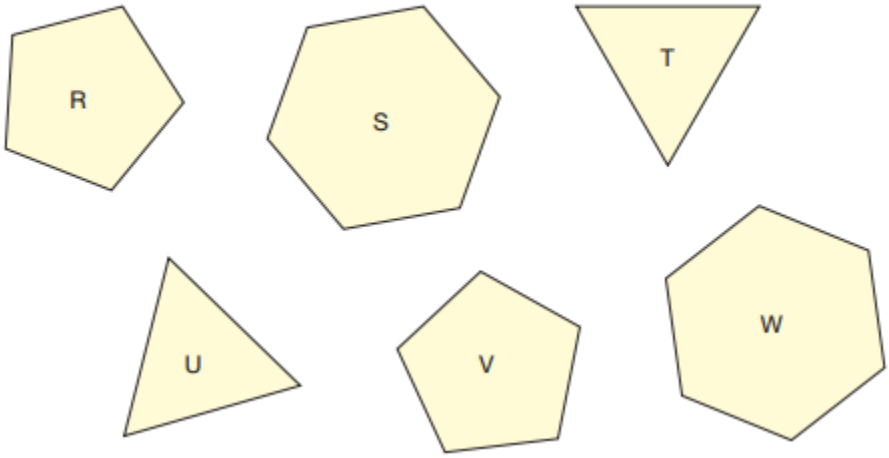


c)



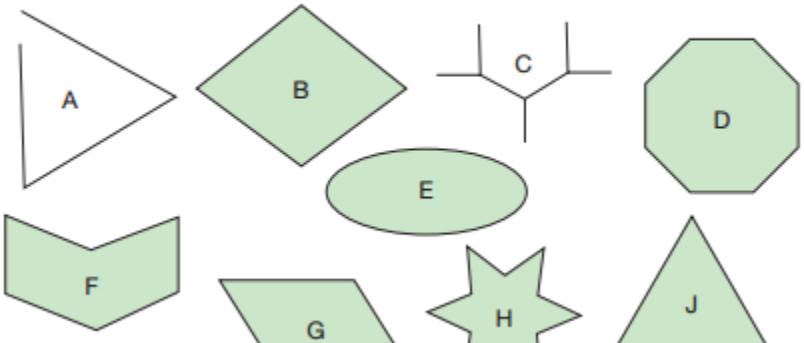
Pg. 222 # 2

2. Which of these polygons are congruent?
How can you tell?



Pg. 240 #3

3. a) Sort these shapes into sets of polygons and non-polygons.
Explain how you decided where to place each shape.



Name: _____ *Date:* _____

(SS3) Area

Pg. 233 #3

3. Copy and complete this chart.

Rectangle	Length (cm)	Width (cm)	Area (cm^2)
A	7	5	?
B	?	6	12.6
C	3	?	13.5
D	5.3	7	?

Which strategy did you use to find the missing number each time?

Pg. 234 #4

4. Matt's dog has a rectangular dog run.
The length of the dog run is 8 m. The total area enclosed is 56 m^2.
How wide is the dog run? Draw a diagram.
How can you use a number sentence to show your thinking?

Pg. 234 #10

10. Rectangle A has area 40 cm^2 and length 8 cm.
The area of Rectangle B is one-half the area of Rectangle A.
The rectangles have the same length.
What is the width of Rectangle B?

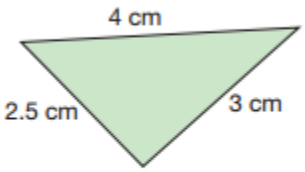
Name: _____ *Date:* _____

(SS3) Perimeter

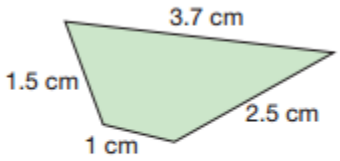
Pg. 229 #3a

3. Find the perimeter of each polygon.

a)



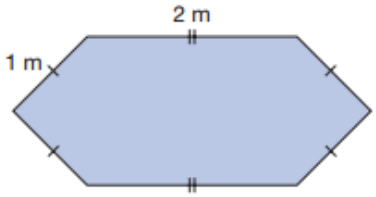
b)



Can you write a rule to find the perimeter of each of these polygons? Why or why not?

Pg. 230 #6c

6. Winnie is building a hexagonal storage box. Here is a drawing of the top of the box.



a) Write a rule to find the perimeter of the top of the box.

b) Write the rule as a formula.

c) What is the perimeter of the top of the box?

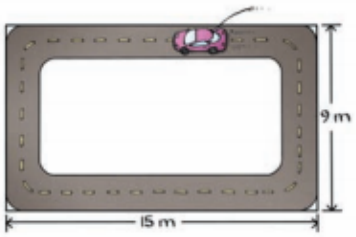
Pg. 230 #9b

Name: _____ *Date:* _____

9. Saki has a remote control car. She enters her car in a race. The track is close to rectangular.

a) Use a formula to find the perimeter of the track.

b) Suppose the car completes 8 laps. How far did the car travel?

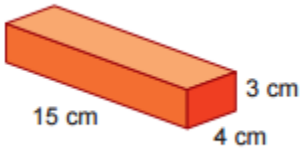


(SS3) Volume

Pg. 237 #1c

1. Find the volume of each rectangular prism.

c)



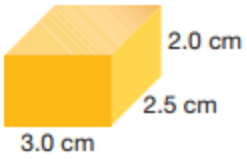
Pg. 237 #5

5. A rectangular prism has volume 90 cm^3. The prism has length 9 cm and width 5 cm. What is its height? How do you know?

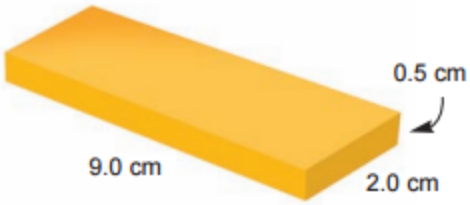
Pg. 237 # 7

Name: _____ Date: _____

7. Canada's Food Guide recommends that we eat 2 to 4 servings of dairy products every day.
   a) This piece of cheese is 1 serving of dairy products. What is its volume?



   b) Is the block of cheese at the right more or less than 1 serving? How do you know?



(PR1) Table of Values

Pg. 9 #4

4. Copy and complete this table.
   The pattern rule that relates the input to the output is:
   Divide the input by 6.
   a) Write the pattern rule for the input.
   b) Write the pattern rule for the output.

Input	Output
36	
42	
48	
54	
60	

Pg. 9 #6

6. The pattern rule that relates the input to the output is:
   Add 4 to the input. Then divide by 2.
   Check the data in the Input/Output table.
   Identify any output numbers that are incorrect.
   How do you know they are incorrect?
   Show your work.

Input	Output
4	2
8	4
16	10
26	15
30	19

Pg. 14 #2

2. Each table shows the input and output from a machine with two operations. For each table:
   - Identify the numbers and the operations in the machine.
   - Choose 4 different input numbers. Find the output for each input.
   - Predict the output when the input is 10. Check your prediction.



Name: _____ *Date:* _____

(PR 2) Patterns

Pg. 22 #1

1. Kilee builds model cars.
She needs 4 plastic wheels for each car she builds.

a) Make a table to show the number of wheels needed for 1, 2, 3, 4, and 5 cars.

b) Write a pattern rule that relates the number of cars to the number of wheels.

c) Write an expression to represent the pattern.

d) Find the number of wheels needed to build 11 cars. How can you check your answer?

Pg. 32 #4

Name: _____ *Date:* _____

4. Use grid paper.

a) Graph the data in the table.

b) Describe the relationship shown on the graph.

c) Write an expression to represent the pattern.

d) 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

Pg. 32 #5

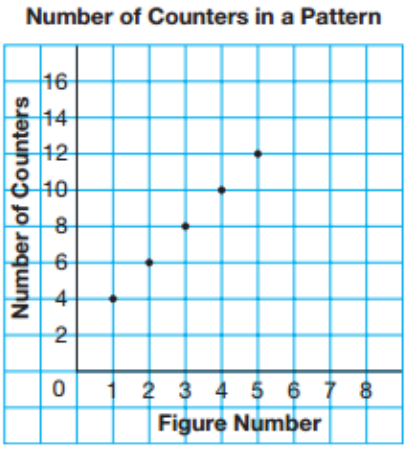
5. Use grid paper.

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.



(SP1) Line Graphs

Pg. 262 #5

Name: _____ *Date:* _____

5. Marina measured the life left in her cell phone battery every two hours for 24 h. She used a line graph to display the data.

a) What happened in the first 4 h?

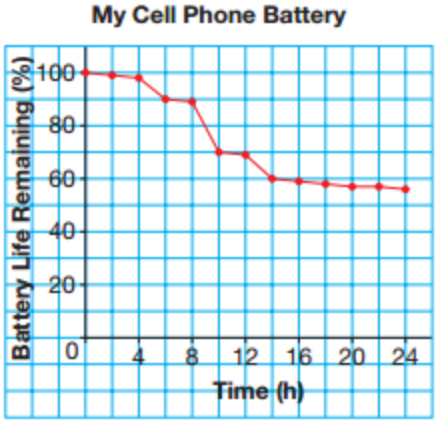
b) What happened between hours 4 and 6?

c) How many times might Marina have used her cell phone? Explain.

d) Between which two hours did Marina use her cell phone the most? How do you know?

e) What percent of the battery life remained after 24 h?

f) What other conclusions can you make from the graph?



Pg. 266 #5 (Need graph paper)

5. A ball is dropped from the top of a cliff. This table shows the distance travelled by the ball in the first 6 s.

a) Draw a graph to display these data.

b) Did you join the points? Explain.

c) Write 2 things you know from the graph.

Pg. 265 #2 (Need graph paper)

Time (s)	Distance (m)
0	0
1	5
2	20
3	45
4	80
5	125
6	180

Name: _____ *Date:* _____

2. The population of killer whales along the British Columbia coast is counted each year. The table shows the data for 2002 to 2006.
   a) Draw a graph to display these data.
   b) Explain how you chose the vertical scale.
   c) Did you join the points? Explain.
   d) What conclusions can you make from the graph?

Year	Number of Killer Whales
2002	81
2003	82
2004	86
2005	85
2006	87

(N2) Large Numbers

Pg. 53 #1

Use a calculator when you need to.

1. The ticket agent sold 357 adult tickets and 662 student tickets for a concert. How much money did the ticket agent take in? Explain how you know your answer is reasonable.



Pg. 53 #6

Name: _____ *Date:* _____

6. This table shows the number of participants at the 2002 and 2006 North American Indigenous Games.

Year	Athletes	Coaches, Managers, and Chaperones
2002 (Winnipeg)	6136	1233
2006 (Denver)	7415	1360

a) What was the total number of participants in 2002?
b) How many more athletes participated in 2006 than in 2002?
c) About how many times as many athletes participated in 2002 as coaches, managers, and chaperones?

How did you decide which operation to use each time?



Opening Ceremonies, 2002 North American Indigenous Games, Winnipeg

Pg. 54 #9

9. The owner of a building renovated 18 apartments. Painting cost $5580 and new lights cost $3186.
   a) Which operation or operations will you use to find the cost for each apartment? Explain.
   b) Estimate this cost. Explain the strategy you used.
   c) Find the exact cost.

(PR3) Equations

Pg. 23 #6

Name: _____ Date: _____

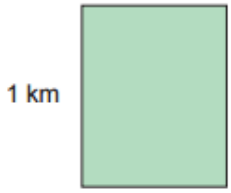
6. Skylar wants to adopt a whale through the BC Wild Killer Whale Adoption Program. The cost of a 1-year adoption is $59. Skylar walks his neighbour's dog to raise the money. He gets $3 for each walk.
   a) Make a table to show the amount left to raise after 1, 2, 3, 4, and 5 walks.
   b) Write a pattern rule that relates the number of walks to the amount left to raise.
   c) Write an expression to represent the pattern.
   d) Find the amount left to raise after 15 walks.
   e) After how many walks will Skylar have raised enough money? How do you know?



Pg. 233 #2

2. Which rectangle below do you think has the greatest area?
   Estimate first. Use a formula to check.
   Order the areas from least to greatest.
   How does the order compare with your prediction?

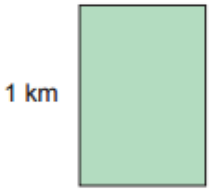
a)



b)

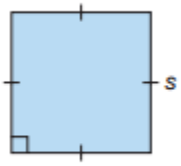


c)



Pg. 234 #8

8. A square has side length s.



Write a formula for the area of a square.

(PR4) Equality

Pg. 35 #1

Name: _____ *Date:* _____

1. Suppose you were using real balance scales.
   Which scales below would balance?
   How did you find out?

a) 

b) 

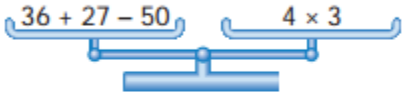
c) 

Pg. 35 #2

2. **a)** Write an expression with 2 numbers and one operation.
   b) Write 5 different expressions that equal your expression in part a.
   What strategy did you use to find the expressions?
   c) Suppose you used real balance scales.
   You put counters to represent 3 of the expressions in the left pan and
   3 in the right pan. What would happen? How do you know?

Pg. 35 #4

4. **a)** Are these scales balanced?



   b) If your answer is yes, why do you think so?
   If your answer is no, what could you do to balance the scales?
   Why would this work?

Order of Operations (N9)

Name: _____ *Date:* _____

Page 72 #6

6. Use mental math to evaluate.

a) $4 \times 7 - 2 + 1$ **b)** $4 \times (7 - 2) + 1$

c) $4 \times 7 - (2 - 1)$ **d)** $4 \times (7 - 2 + 1)$

e) $(4 \times 7 - 2) + 1$ **f)** $4 \times 7 - (2 + 1)$

Which expressions give the greatest answer?

The least answer?

Page 73 #12

12. Copy each number sentence.

Use brackets to make each number sentence true.

a) $36 \div 4 \times 3 = 3$

b) $20 \div 5 \times 2 + 3 = 5$

c) $10 - 4 \div 2 - 1 = 6$

d) $6 \times 2 + 8 \div 4 = 15$

Page 73 #11

11. Monsieur Lefèvre bought 2 boxes of fruit bars for his 3 children.
Each box has 6 fruit bars.
The children shared the fruit bars equally.
How many fruit bars did each child get?
Write an expression to show the order of operations you used.



Triangles (SS4)

Name: _____ *Date:* _____

Page 211 #1a

1. Use either or both of these tools: ruler and protractor
- Construct each triangle listed below.
- Explain how you know you have drawn that triangle.

a) an acute triangle

Page 211 #1c

1. Use either or both of these tools: ruler and protractor
- Construct each triangle listed below.
- Explain how you know you have drawn that triangle.

c) an isosceles triangle

Page 212 #3b

3. Use a ruler and a protractor.
Construct each triangle.
Sketch the triangle first.

a) Isosceles triangle VWX
The length of side VW is 7 cm.
The measure of ∠V is 80°.
The measure of ∠W is 50°.

b) Obtuse triangle RST
The length of side TS is 5.2 cm.
The measure of ∠T is 30°.
The length of side RT is 3.4 cm.

Label each triangle with the measures of all the sides and angles.



Interior Angles - Triangles (SS2)

Name: _____ *Date:* _____

Page 148 #4

4. Two angles of a triangle are given.
Find the measure of the third angle.

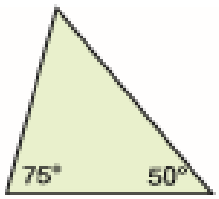
a) 55°, 105° **b)** 45°, 90°

c) 30°, 60° **d)** 25°, 125°

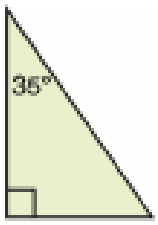
Page 148 #2

2. Determine the measure of the third angle without measuring.

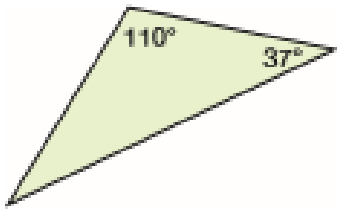
a)



b)



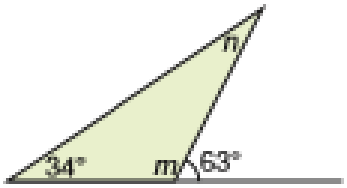
c)



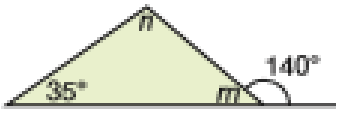
Page 149 #8

8. Find the measures of the angles labelled *m* and *n*.
Explain the strategy you used.

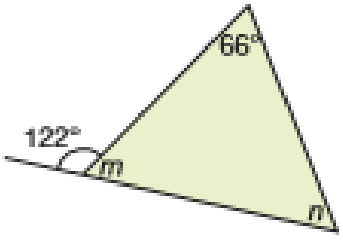
a)



b)



c)



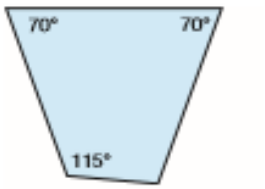
Interior Angles - Quadrilaterals (SS2)

Name: _____ Date: _____

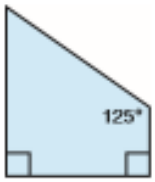
Page 152 #2

2. Find the unknown angle measure in each quadrilateral.

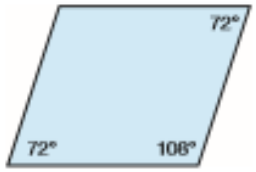
a)



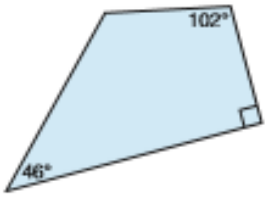
b)



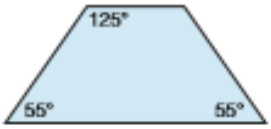
c)



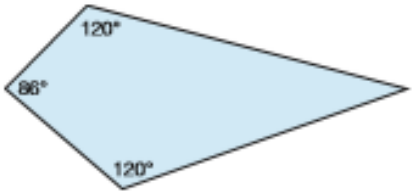
d)



e)



f)



Page 152 #3

3. A student drew 4 different quadrilaterals.
She recorded the angle measures in a table.

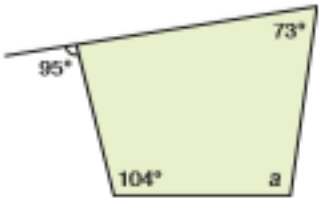
Quadrilateral	∠A	∠B	∠C	∠D
a)	225°	36°	47°	42°
b)	81°	99°	81°	99°
c)	90°	45°	120°	105°
d)	123°	66°	108°	73°

Did the student measure the angles in each quadrilateral correctly?
How do you know?

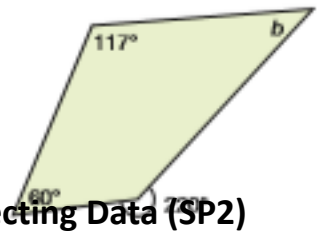
Page 153 #6

6. Find the measure of the angles labelled *a*, *b*, and *c*.
Show your work.

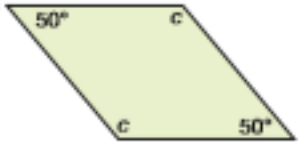
a)



b)



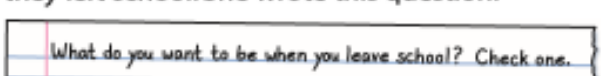
c)



Collecting Data (SP2)

Page 251 #5

5. Ariel wanted to find out what the Grade 6 students in her school wanted to be when they left school. She wrote this question.





Name: _____ Date: _____

Page 258 #4

4. Morgan experimented with 3 different paper airplanes to answer this question: Which airplane travels the greatest distance? Morgan flew each plane 4 times and measured the length of each flight. Here are the data Morgan collected.

Airplane Design	Trial 1	Trial 2	Trial 3	Trial 4
The Dart	6.3 m	18.4 m	12.2 m	4.1 m
Flying Squirrel	11.3 m	10.5 m	9.8 m	11.2 m
Speed-o-matic	3.1 m	2.5 m	2.1 m	3.6 m

What answer would you give to the question above? Explain your choice.

Page 284 #3

3. For each question below, choose an appropriate method to collect data to answer the question. Explain your choice.
   a) What are the 5 largest countries by area in the world?
   b) What is the favourite summer activity of students in your class?
   c) How many steps does it take a Grade 6 student in your school to walk from one end of the hallway to the other?

Graphing Data (SP3)

Page 269 #2

2. Zena surveyed the Grade 6 students in her class to answer this question: What is your favourite flavour of fruit juice? This table shows the data she collected.

Girls		Boys	
Flavour	Number of	Flavour	Number of

Name: _____ *Date:* _____

Page 270 #4

4. Jeremy conducted an experiment to answer this question: How fast does the centre of a potato cool down after it is removed from boiling water?
The table shows the data he collected.

a) Draw a graph to display these data.
Explain your choice of graph.

b) What conclusions can you make from the graph?

Time (min)	Temperature (°C)
0	91
5	80
10	67
15	58
20	50
25	45
30	41
35	37
40	34

Page 285 #6

6. Trevor used the Statistics Canada Web site to find the number of Canadians who visited various destinations in 2006.
The table shows the data he collected.

a) Draw a graph to display these data.
Explain your choice of graph.

b) What conclusions can you make from the graph?

Destination	Canadian Visitors (thousands)
Hong Kong	150
China	250
Cuba	638
France	645
Germany	334
Mexico	841
United Kingdom	778

Probability (SP4)

Name: _____ Date: _____

Page 273 #1

1. A paper bag contains 2 green tiles, 4 yellow tiles, and 1 blue tile. Liz draws a tile without looking.
   a) List the possible outcomes.
   b) What is the theoretical probability that the tile is:
      i) green? ii) yellow? iii) blue?



Page 278 #2

2. Dave tossed a coin 20 times. Heads showed 12 times.
   a) How many times did tails show?
   b) What fraction of the tosses showed heads? Tails?
   c) Are these results what you would expect? Explain.
   d) Dave tosses the coin 100 times.
   What would you expect the results to be? Explain.

Page 279 #6

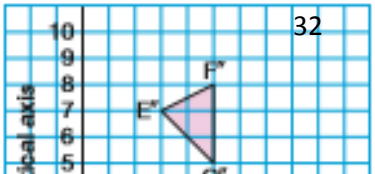
6. Zeroun and Ammon are playing a game.
They spin the pointer on this spinner.
If the pointer lands on an even number, Zeroun wins.
If the pointer lands on an odd number, Ammon wins.
   a) Is this a fair game? How do you know?
   b) What is the theoretical probability of the pointer landing on an even number?
   c) Use a spinner like this one.
   Play the game at least 30 times.
   Record your results.
   Were the results what you expected? Explain.
   d) What results would you expect if you played the game 100 times? Explain how you made your prediction.



Transformations - Combinations (SS6)

Page 306 #3

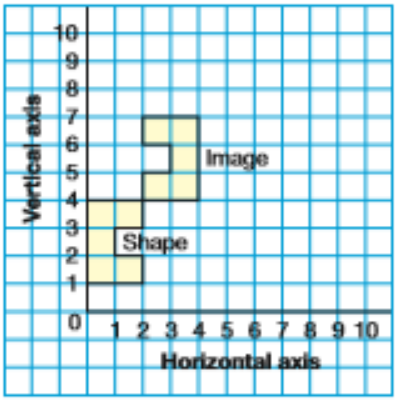
3. Describe two successive transformations that move $\triangle EFG$ to its image, $\triangle E''F''G''$.
Show your work.



Name: _____ Date: _____

Page 307 #5

5. a) Describe two successive transformations that move the octagon to its image.

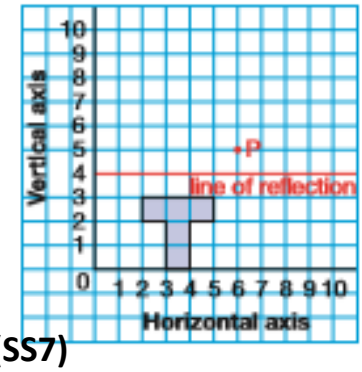


b) Can you find two other successive transformations? Explain.

Page 311 #3

3. a) Copy the octagon on a coordinate grid.
   - Reflect the octagon in the line of reflection.
   - Then rotate the reflection image 270° counterclockwise about P.

   b) Draw and label both images.
   c) What are the coordinates of the vertices of the final image?
   d) Are the octagon and its final image congruent? How do you know?

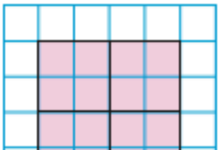


Design with Transformations (SS7)

Page 315 #1

1. Explain how you could use transformations to make each design.

a)

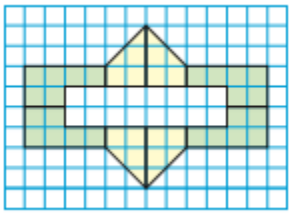




Name: _____ *Date:* _____

Page 316 #3

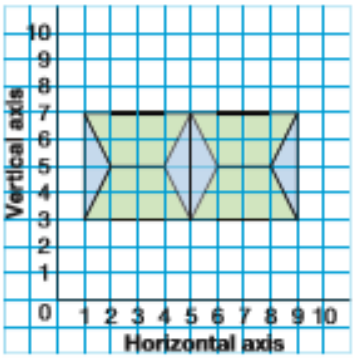
3. Recreate this design.
Identify the original shapes.
Describe a set of transformations that could be used to create the design.



Page 323 #7

7. This design was formed by repeatedly transforming 2 shapes.

a) Copy the design.
Identify the 2 original shapes.
b) Describe the transformations that could have been used to create the design.
c) Is another set of transformations possible?
If your answer is yes, describe the transformations.
d) Use the 2 original shapes and transformations to make a different design.
Describe the transformations you used.





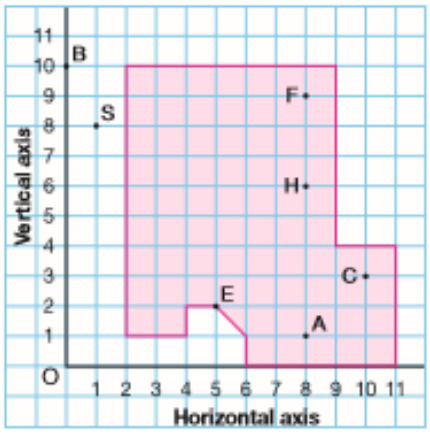
Name: _____ Date: _____

Page 27 #4

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

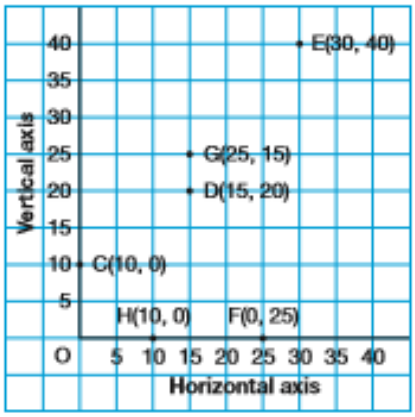
Write the ordered pair for each place.

a) Amazon Jungle Area: A
b) Beluga Whales: B
c) Carmen the Reptile: C
d) Entrance: E
e) Frogs: F
f) Sea Otters: S
g) Sharks: H



Page 28 #8

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:
   a) Explain the mistake.
   b) Write the coordinates that correctly describe the location of the point.



Page 294 #6

6. Draw and label a coordinate grid.
   a) Plot each point on the grid.
      What scale will you use?
      Explain your choice.
      A(10, 30) B(35, 30) C(35, 15) D(10, 15)
   b) Join the points in order. Then join D to A.
      Describe the shape you have drawn.
   c) Find the length of each side of the shape.
      Show your work.

Transformations on a Plane (SS9)

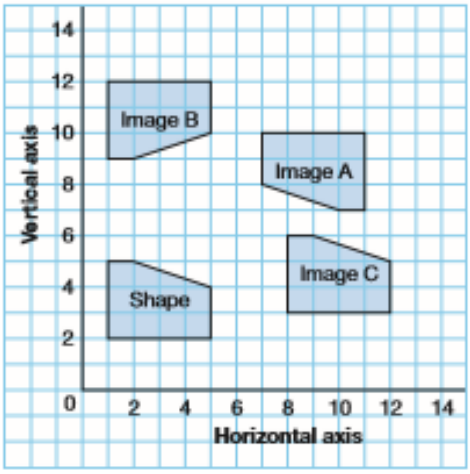
Name: _____ *Date:* _____

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3. This diagram shows a shape and its image after 3 different transformations.

Identify each transformation.
Explain how you know.

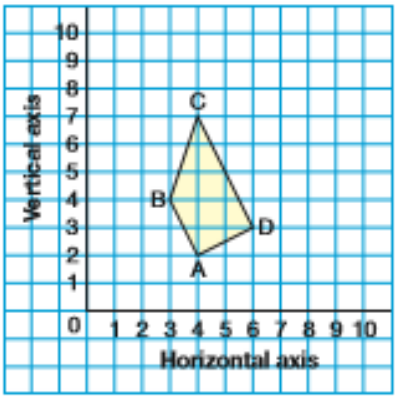
a) the shape to Image A
b) the shape to Image B
c) the shape to Image C



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4. Copy this quadrilateral on a coordinate grid.
Trace the quadrilateral on tracing paper.
Draw the image of the quadrilateral after each rotation below.
Write the coordinates of the vertices.

a) 90° clockwise about vertex B
b) 270° clockwise about vertex B
c) 270° counterclockwise about vertex B



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6. A quadrilateral has these vertices:
Q(5, 2), R(4, 5), S(9, 4), T(6, 3)
Draw the quadrilateral on a coordinate grid.
For each transformation below:

- Draw the image.
- Write the coordinates of the vertices of the image.
- Describe how the positions of the vertices of the quadrilateral have changed.

a) a translation of 3 squares left and 1 square down
b) a rotation of 90° clockwise about vertex S
c) a reflection in the horizontal line through the vertical axis at 6