GRADE 6 MATHEMATICS

Blackline Masters

BLM 6.N.1.1: Small Decimals

- a) 0.281 45
- b) 0.002 59
- c) 0.250 05
- d) 0.8097
- e) 0.300 4
- f) 0.387 03
- g) 0.205 07
- h) 0.243 590 6
- i) 0.990 500 1
- j) 0.390 401 03

BLM 6.N.2.1: Nedy's Bike Ride

Nedy used her bike to go everywhere. Today, she took a small notebook to record all her bike trips for the day. Then, she remembered yesterday's rides and she recorded them too.

Today

First, Nedy rode to school. The school is 245 m away from Nedy's house. Then, she rode back home. Later on, Nedy rode with her Mom to the grocery store and back. The grocery store is 2.3 km away from her house.

Yesterday

First, Nedy rode to Lily's house. Lily lives 342 m away from Nedy's house. Then, the two of them rode to school and back to Lily's house. Lily lives 439 m away from the school. Later, Nedy went home for supper.

BLM 6.N.2.2: Am I Reasonable?

- 1. Rose read that in a certain country 35 000 000 people are living in cities and 47 000 000 are living in rural areas. She concluded that the total population is 82 000 000.
- Jim said that big numbers are easy to calculate.
 839 000 000 604 000 00 must be 200 000 000.
- Penny's laboratory has 305 containers of microscopic organisms. Each container has 199 000 030 organisms inside. Penny wrote in her notebook: "This laboratory has approximately 500 000 000 000 microscopic organisms."
- 4. A company made \$692 000 435 profit last year. The president divided the profit among the 49 shareholders. Each shareholder received \$15 000 000.

BLM 6.N.2.3: Estimate and Solve

- 1. An oil company has 199 000 030 customers. If each customer buys 530 barrels of oil, how many barrels of oil does the company sell?
- 2. The local paper stated that 29 000 600 kg of wheat were sold last year, and 43 006 000 600 kg of wheat were sold this year. How many kilograms of wheat were sold over the two years?
- A group of 49 people retired and sold their company for \$296 000 435. How much did each person receive?
- 4. Out of the population of 835 000 000, how many are employed if 64 000 000 are unemployed?

BLM 6.N.2.4: Identify and Correct

- In Country 1, there are 35 000 000 men and 47 000 000 women. In Country 2, there are 368 000 000 men and 200 008 020 women. Danny figures that the population of Country 1 is 82 000 000 and Country 2 is 569 000 000.
- If Earth had 358 000 000 English-speaking people and 46 000 000 moved to another planet, how many would remain on Earth? Roby says 300 000 000.
- 3. If 386 000 000 mosquitos hatch each summer, in 990 years there will be 386 000 000 000 mosquitos.
- 4. Pam and her friends were discussing money. They decided that if they could win \$896 000 000 and divide it among all 20 of them, each would get \$450 000 000.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

BLM 6.N.3.1: Multiples and Factors; Primes and Composites

BLM 6.N.3.2: What's Common?

Set A: Find a common factor for each pair of numbers.

9 and 12; 20 and 28; 15 and 35

Set B: Find a common multiple for each pair of numbers.

8 and 3; 9 and 12; 4 and 26

Set C: Find a common factor for each group of three numbers.

15, 21, 63; 54, 72, 81; 28, 56, 84

Set D: Find a common multiple for each group of three numbers.

3, 4, 6; 2, 3, 5; 2, 3, 4

BLM 6.N.3.3: Dilly's Dilemma

Last week, Dilly got \$10 from Uncle Ed, \$15 from Grandma, and \$30 from Aunt Sue.

Dilly's older twin brothers, Bobby and Johnny, did not get any money from anyone. They decided to ask Dilly for some of her money in a very funny way.

The boys just had a math lesson on primes, composites, factors, and multiples, and they wanted to impress Dilly with their new terminology.

Bobby said: "All your numbers are composite. I want the largest common factor of the three numbers."

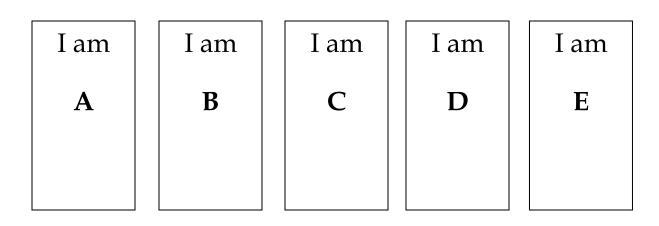
Johnny said: "I will be happy with the least common multiple, even if it is not prime."

Dilly did not know what her twin brothers were talking about. Do you?

Can you help Dilly?

BLM 6.N.3.4: The Ten of Us

We are five friends. Each of us is a natural number.



Each of us has a cousin. They are 2 times our value.

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|-------|-------|-------|-------|-------|
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| times | times | times | times | times |
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| | | | | |

(The cousins have twice as many factors as each of the five friends.)

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BLM 6.N.4.1: Fractions

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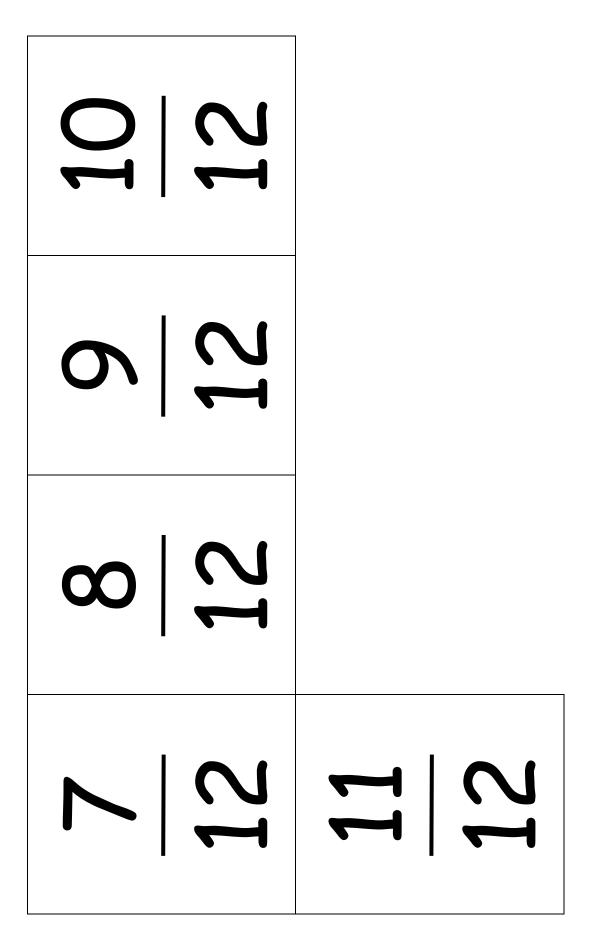
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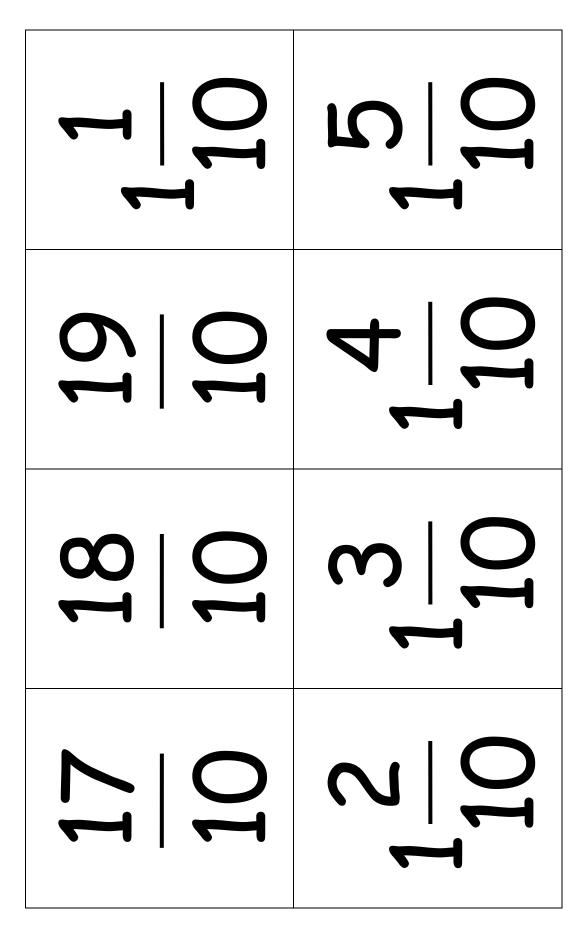
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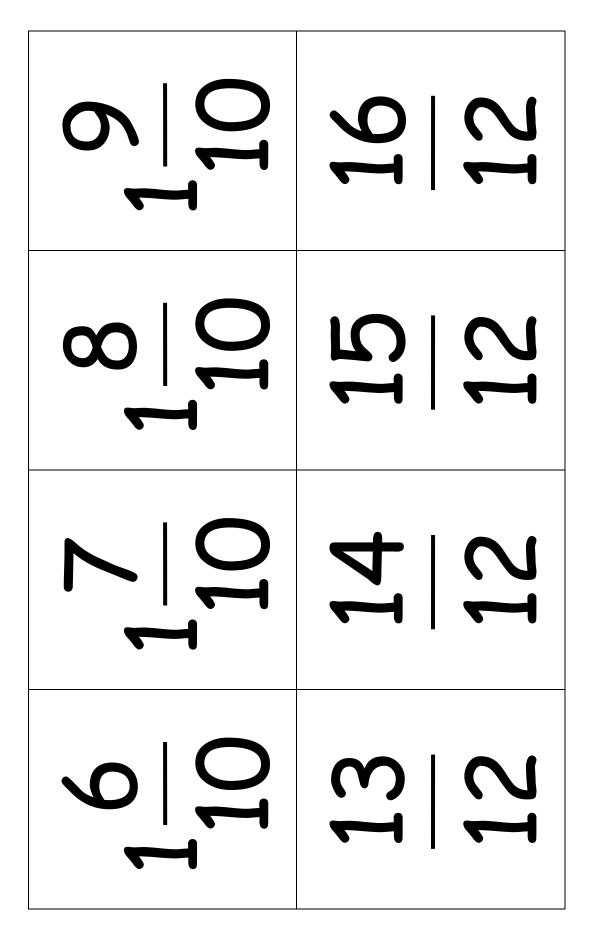
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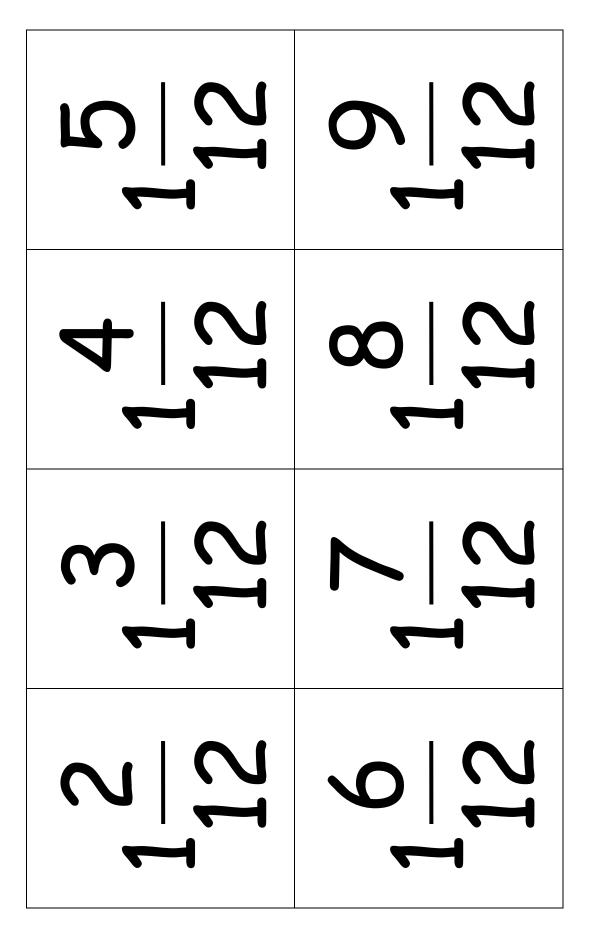


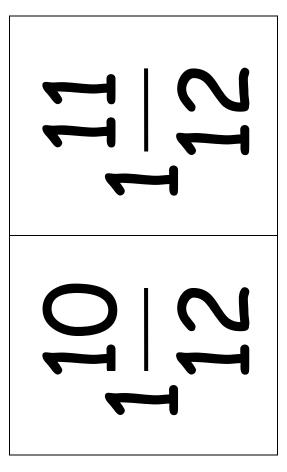


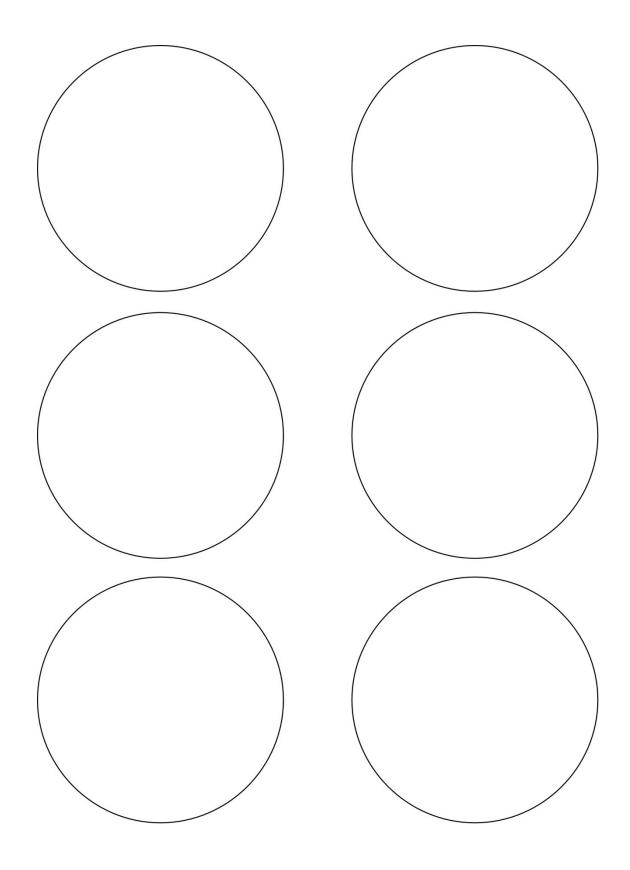


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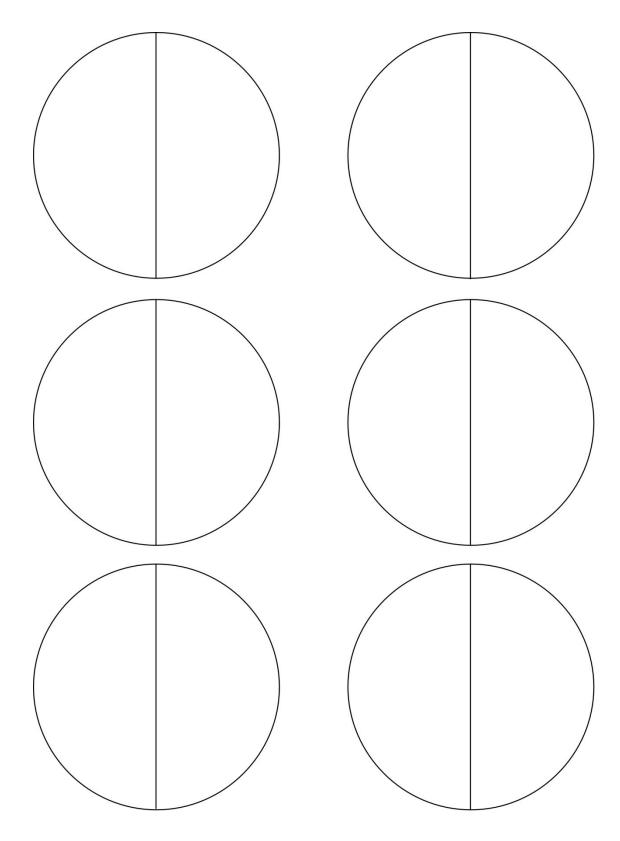


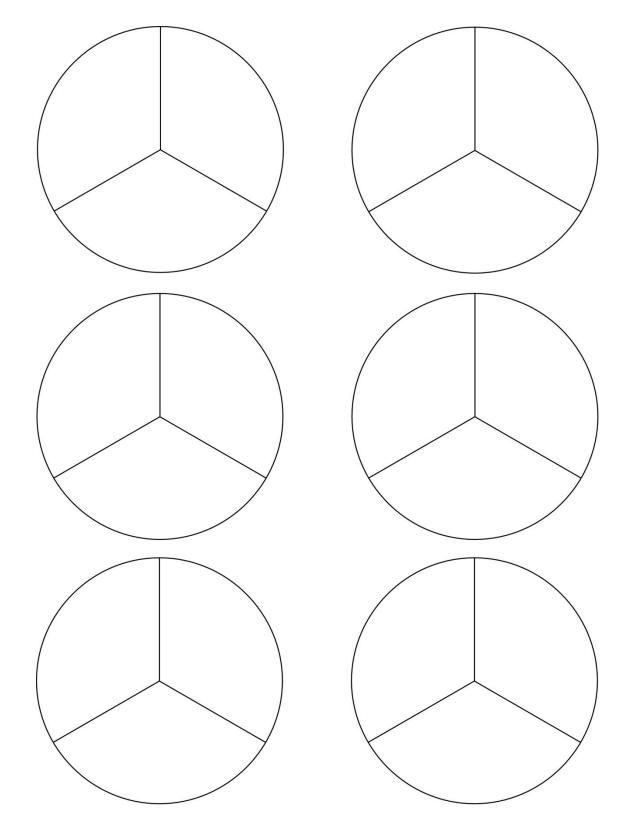




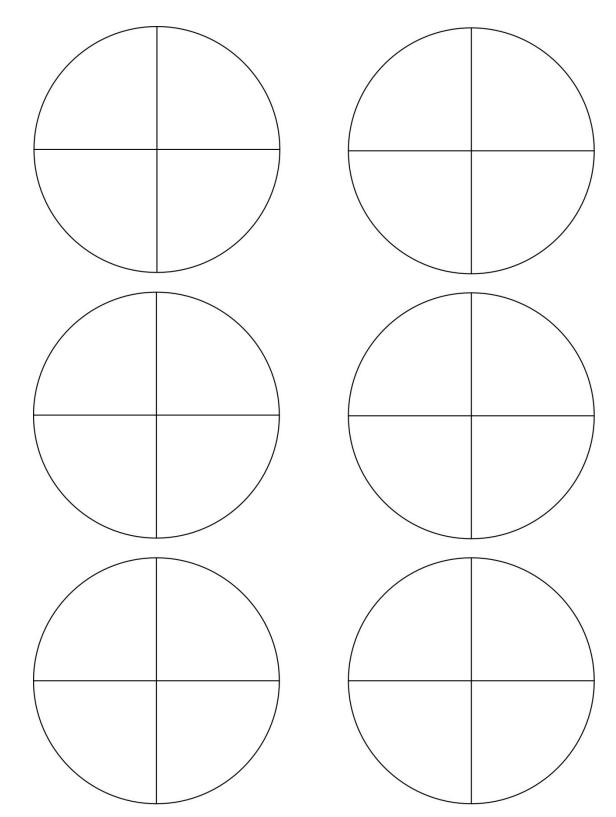




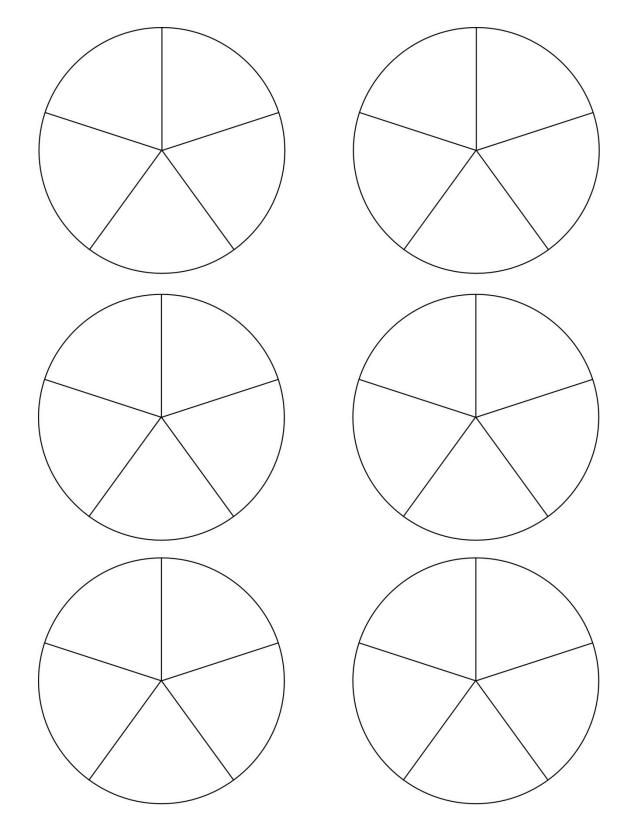




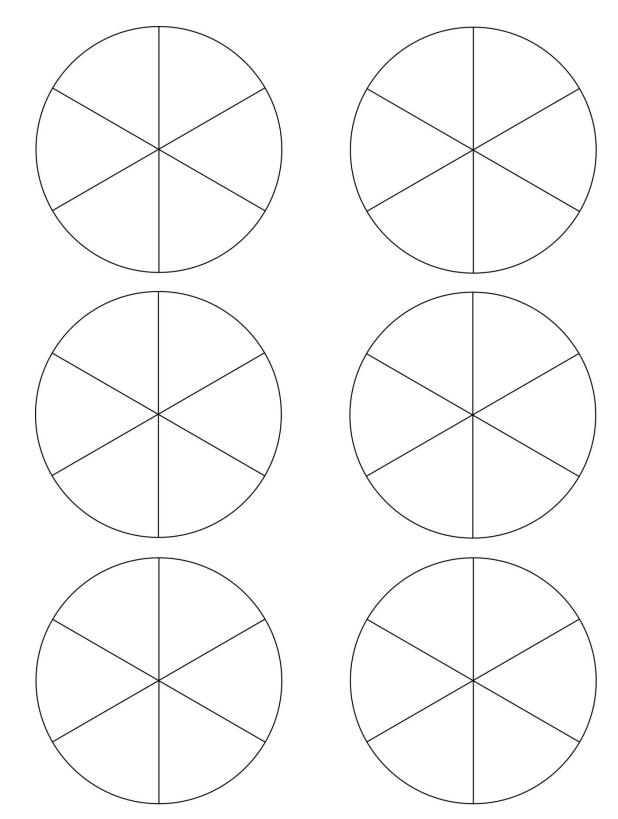
BLM 6.N.4.2: Fraction Circles (continued)



BLM 6.N.4.2: Fraction Circles (continued)



BLM 6.N.4.2: Fraction Circles (continued)



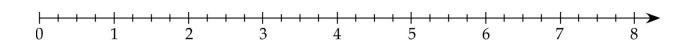
BLM 6.N.4.2: Fraction Circles (continued)

BLM 6.N.4.3: Improper Fractions and Mixed Numbers

Improper Fraction	Pictorial Representation	Mixed Number
$\frac{7}{5}$		
$\frac{12}{5}$		
$\frac{18}{5}$		
$\frac{6}{5}$		
$\frac{21}{5}$		
$\frac{8}{5}$		

BLM 6.N.4.4: State My Fraction

Mixed Number	Pictorial Representation	Improper Fraction



BLM 6.N.4.6: Vertical Number Line



BLM 6.N.5.1: Uncle Farley's Farm Animals

Uncle Farley has a farm, and on his farm he has many different animals.

Here is the list of animals Uncle Farley has on his farm:

7 cows 4 horses 20 chickens 15 ducks 1 dog 3 cats

Uncle Farley is very proud of his many animals. He likes to count them. He also likes to show them to visitors.

Description (Pick one ratio form, and use it in a sentence to describe Uncle Farley's animals)					
Ratio Form: a to b					
Ratio Form: a b					
Ratio Form: a:b					
Animals Compared					

BLM 6.N.5.2: Ratio Map for Uncle Farley's Farm Animals

BLM 6.N.5.3: Ratio Problems

- The Grade 6 Art class consists of 9 boys and 12 girls.
 State the following ratios:
 - a) boys to girls
 - b) boys to whole class
 - c) girls to whole class
- 2. Aunt Suzie planted 2 rows of carrots, 6 rows of tomato plants, and 5 rows of lettuce.

State the following ratios:

- a) carrots to tomato plants
- b) carrots to total number of rows
- c) tomato plants to lettuce
- d) tomato plants to carrots
- d) lettuce to carrots
- 3. Billy has 4 pairs of brown socks, 3 pairs of blue socks,1 pair of black socks, and 8 pairs of white socks.

State the following ratios:

- a) brown socks to blue socks
- b) brown socks to black socks
- c) blue socks to white socks
- d) blue socks to total pair of socks

BLM 6.N.5.4: Uncle Bert's Ratio Riddle

Danny knows that his school is 1 km away from his house.

Uncle Bert says that you can figure out how far a place is if you know the ratio of the distances.

Danny wants to figure out how far is the nearest store.

Uncle Bert gives him a riddle full of ratios.

The distance to my house and the distance to Grandma's house have a ratio 5 to 20.

The distance to the store and the distance to the arena have a ratio 3 to 8.

The distance to Grandma's and the distance to the arena have a ratio 20 to 7.

The distance to my house and the distance to the school have a ratio 5 to 1.

BLM 6.N.6.1: What Is My Equal?

State an equivalent fraction:

a)	0.28
b)	0.59
c)	0.05
d)	0.97
、	0.00

e) 0.30

State an equivalent decimal:

a)	$\frac{34}{100}$
b)	$\frac{5}{100}$
c)	$\frac{43}{100}$
d)	<u>99</u> 100
e)	$\frac{62}{100}$

BLM 6.N.6.2: Gizzy Saw These Birds

Last weekend, Gizzy went to the zoo with her Grandma. She saw many animals and birds. She liked them all but she was most impressed with the many coloured birds.

On Monday, Gizzy was happy to tell her friends that out of all the birds she saw, 25% were yellow, 42% were black, 10% were blue, 15% were white, and 8% were red.

BLM 6.N.6.3: My Ratio Is ... Who Has?

My ratio is 95 sec./100 sec.	My ratio is 7 km/100 km.
Who has 7%?	Who has 51%?
My ratio is 51 cm/100 cm.	My ratio is 99 days/100 days.
Who has 99%?	Who has 28%?
My ratio is 28 m/ 100 m.	My ratio is 19 mL/100 mL.
Who has 19%?	Who has 87%?
My ratio is 87 kg/100 kg.	My ratio is 66 mg/100 mg.
Who has 66%?	Who has 73%?
My ratio is 73 km/100 km.	My ratio is 89 hr./100 hr.
Who has 89%?	Who has 3%?
My ratio is 3 doz./100 doz.	My ratio is 72 kL/100 kL.
Who has 72%?	Who has 11%?

BLM 6.N.6.3: My Ratio Is ... Who Has? (continued)

My ratio is 11 min./100 min.	My ratio is 37 km/100 km.
Who has 37%?	Who has 41%?
My ratio is 41 cm/100 cm.	My ratio is 92 days/100 days.
Who has 92%?	Who has 68%?
My ratio is 68 m/100 m.	My ratio is 15 mL/100 mL.
Who has 15%?	Who has 57%?
My ratio is 57 kg/100 kg.	My ratio is 26 mg/100 mg.
Who has 26%?	Who has 33%?
My ratio is 33 km/100 km.	My ratio is 84 hr./100 hr.
Who has 84%?	Who has 2%?
My ratio is 2 doz./100 doz.	My ratio is 47 kL/100 kL.
Who has 47%?	Who has 95%?

BLM 6.N.6.4: 100-Square Grid Paper

BLM 6.N.6.5: Percent Grids

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BLM 6.N.6.6: Percent, Fraction, and Decimal Sheet

Question Number	Percent	Fraction	Decimal
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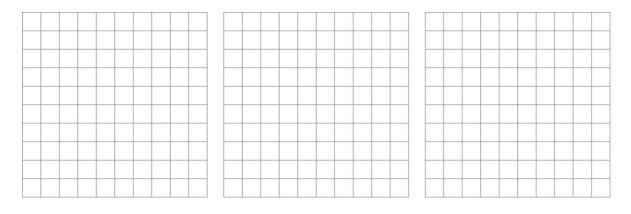
BLM 6.N.6.7: Say My Equal Fraction, Say My Equal Decimal

I am 69%.	I am 16%.
Say my equal fraction.	Say my equal fraction.
I am 6%.	I am 21%.
Say my equal fraction.	Say my equal fraction.
I am 30%.	I am 46%.
Say my equal fraction.	Say my equal fraction.
I am 95%.	I am 62%.
Say my equal fraction.	Say my equal fraction.
I am 18%.	I am 78%.
Say my equal fraction.	Say my equal fraction.
I am 82%.	I am 100%.
Say my equal fraction.	Say my equal fraction.

BLM 6.N.6.7: Say My Equal Fraction, Say My Equal Decimal (continued)

I am 3%.	I am 8%.
Say my equal decimal.	Say my equal decimal.
I am 19%.	I am 23%.
Say my equal decimal.	Say my equal decimal.
I am 31%.	I am 49%.
Say my equal decimal.	Say my equal decimal.
I am 56%.	I am 62%.
Say my equal decimal.	Say my equal decimal.
I am 88%.	I am 76%.
Say my equal decimal.	Say my equal decimal.
I am 93%.	I am 100%.
Say my equal decimal.	Say my equal decimal.

BLM 6.N.6.8: Percent Grids (One Row)



To make your *three designs*, use the following colours:

- *light green* gooseberries
- *red* red currents
- *black* blackberries
- *purple* raspberries

BLM 6.N.6.9: Grandpa's Berry Bushes

Grandpa dug up a 10-metre-by-10-metre square area in the garden for his berry bushes.

Grandpa planted one berry bush in each square metre. He covered 24% of the dug-up area with gooseberries, 16% with red currents, 20% with blackberries, and 40% with raspberries because Grandpa likes raspberries the most.

Grandpa wants your help.

BLM 6.N.7.1: Integers

- A. 5 and 3
- B. -6 and 0
- C. 12 and –12
- D. -7 and 2
- E. 4 and –13
- F. 7 and 7
- G. 18 and –21
- H. -8 and 5
- I. 15 and 17
- J. –12 and –12

BLM 6.N.7.2: Compare Integers

Integer A	Symbol <, >, or =	Integer B

BLM 6.N.8.1: Izabella's Teacher

Izabella's teacher told the class to use front-end estimation to solve the following decimal questions:

 $$27.83 \div 5 = 5566$ $492.23 \text{ kg} \div 8 = 6152875$ $192.851 \text{ m} \div 9 = 214279$ $51.158 \text{ km} \div 7 = 7308$ $38.419 \text{ mg} \div 6 = 6403$ $$693.19 \div 10 = 69319$ $810.732 \text{ cm} \div 100 = 810732$

Then, Izabella's teacher told the class to carefully consider where they place the decimal point in the quotient.

Products	Quotients
5.6 cm × 2	49.8 mL ÷ 8
$18.2mL \times 5$	23.18 m ÷ 7
21.3 mg × 6	61.05 km ÷ 6
82.106 g × 3	25.81 dg ÷ 4
95.023 dl ×4	55.1 cm ÷ 9
7.83 kg × 10	897.32 g ÷ 10
9.214 m × 100	394.32 ÷ 100

BLM 6.N.8.2: Decimal Products and Quotients

BLM 6.N.8.3: Marie's Cell Phone Bill

Marie received her cell phone bill in the mail. She was shocked by how high it was. The bill states: "Payment required: \$87.00."

Marie double-checked the bill. According to the bill, Marie gets charged \$0.10 per text, and her bill indicates that she texted only 87 times. Is her bill correct? Explain your thinking.

Products	Quotients
$23.32 \times 3 = 699.4$	$498.72 \div 8 = 6.234$
$22.21 \times 5 = 11.105$	$721.28 \div 7 = 103.04$
21.2 × 8 = 16.96	61.05 ÷ 5 = 122.1
82.106 × 100 = 821.06	$35.88 \div 4 = 89.7$
95.053 × 2 = 1901.06	$55.125 \div 9 = 61.25$
$27.83 \times 10 = 278.3$	9297.32 ÷ 10 = 92.9732
93.215 × 100 = 932.15	2394. 12 ÷ 100 = 239.412

BLM 6.N.8.4: Errors of Decimal Point Placement

BLM 6.N.8.5: Multiplication and Division Problems Involving Decimals

Set A

- Kitty Cat eats four times a day. On Tuesday, Kitty Cat ate 12.86 hectograms of meat. How many hectograms of meat did Kitty Cat eat for each meal?
- 2. Black Colt gallops 3.15 kilometres each day. How many kilometres does Black Colt gallop in one week?

Set B

- 3. Piggy runs 7.28 metres from the pigsty to the trough and the same distance back, 10 times a day. How many metres does Piggy run each day?
- 4. Bull Dog goes for a walk with his owner twice a day. During the past five days, Bull Dog walked26.48 kilometres. How many kilometres does Bull Dog walk each time?

BLM 6.N.8.6: Complete the Charts

	Multiplication		Division
А	$8.75 \times 1 = 8.75$	D	3967 ÷ 1 = 3967
	8.75 × 10 = 87.5		3967 ÷ 10 = 396.7
	8.75 × 100 = 875		3967 ÷ 100 = 39.67
	8.75 × 1000 = 8750		$3967 \div 1000 = 3.967$
В	2.694 × 1 =	Е	6482 ÷ 1 =
	2.694 × 10 =		6482 ÷ 10 =
	2.694 × 100 =		6482 ÷ 100 =
	2.694 × 1000 =		6482 ÷ 1000 =
С	9.273 × 1 =	F	7419 ÷ 1 =
	9.273 × 10 =		7419 ÷ 10 =
	9.273 × 100 =		7419 ÷ 100 =
	9.273 × 1000 =		7419 ÷ 1000 =

BLM 6.N.8.7: Use Mental Math

Products	Quotients
23.14 × 10 =	458.73 ÷ 100 =
7.21 × 100 =	621.25 ÷ 100 =
1.872 × 100 =	831.05 ÷ 10 =
382.61 × 10 =	325.8 ÷ 10 =
94.023 × 10 =	505.25 ÷ 10 =
2.837 × 100 =	9297.32 ÷ 100 =
43.295 × 100 =	7394.14 ÷ 100 =

BLM 6.N.8.8: Question Sheet

- 1. You divide 2 numbers and the answer is 2.5. What are the two numbers? What is the word problem that you are solving?.
- 2. Write a problem that uses the multiplication 1.9×7 .
- 3. Create a question involving multiplication or division of decimals where the digits 4, 9, and 2 appear somewhere.
- 4. What would you draw to show 4.4×8 ?
- 5. Why does it make sense that 7.7×9 is one-tenth of 77×9 ?
- 6. How can you predict that 8×2.3 is between 16 and 20?
- 7. If you know that $714 \div 4 = 178.5$, explain how you know that $7.14 \div 4 = 1.785$.
- 8. A soup pot holds 17.78 litres.
 - a) If it held a little bit more, how much would it hold? Write this amount with digits in the tens, units, and tenths places (____.__).
 - b) Each person will get a bowl of soup. Decide how much each person gets, between 0.2 and 0.4 L, but choose a number that has a digit in the hundredths place (0.___). How many servings would you get in the pot?

BLM 6.N.9.1: One Solution, Two Solutions?

Bonny and Jenny loved to compare their work. Yesterday, their math teacher assigned the following question for homework:

 $3 + 5 \times 7 - 2 + 9 \div 3 =$

Both girls decided that the question needs to be split into many parts.

Bonny solved the problem like this:	Jenny solved the problem like this:	
3 + 5 = 8	$5 \times 7 = 35$	
$8 \times 7 = 56$	$9 \div 3 = 3$	
56 - 2 = 54	3 + 35 = 38	
54 + 9 = 63	38 - 2 = 36	
$63 \div 3 = 21$	36 + 3 = 39	
Then, Bonny stated:	Then, Jenny stated:	
$3 + 5 \times 7 - 2 + 9 \div 3 = 21$	$3 + 5 \times 7 - 2 + 9 \div 3 = 39$	

BLM 6.N.9.2: Use Your Pencil: Set A

 $6 \times 3 + 8 \div 2 =$

$25 - 12 \div 3 \times 4 =$

 $63 \div 9 + 8 \times 3 =$

$$100 \div 2 - 5 + 6 \times 2 =$$

 $2 + 3 \times 9 - 20 \div 5 =$

BLM 6.N.9.3: Use Your Pencil: Set B

 $7 \times 9 - 3 + 24 \div 8 =$

 $72 \div 8 + 95 - 4 \times 7 =$

 $37 - 4 \times 6 + 72 \div 9 + =$

 $45 \div 5 - 5 + 7 \times 6 =$

 $43 + 9 \times 9 - 64 \div 8 =$

BLM 6.N.9.4: Use Your Calculator: Set A

 $18 \times 6 + 240 \div 30 =$

 $630 - 180 \div 6 \times 5 =$

$$810 \div 9 - 12 \times 7 =$$

$$960 \div 30 + 25 \times 9 =$$

 $43 + 17 \times 9 - 270 \div 30 =$

BLM 6.N.9.5: Use Your Calculator: Set B

 $26 \times 9 - 7 + 963 \div 3 =$

 $817 + 258 \div 6 - 13 \times 3 =$

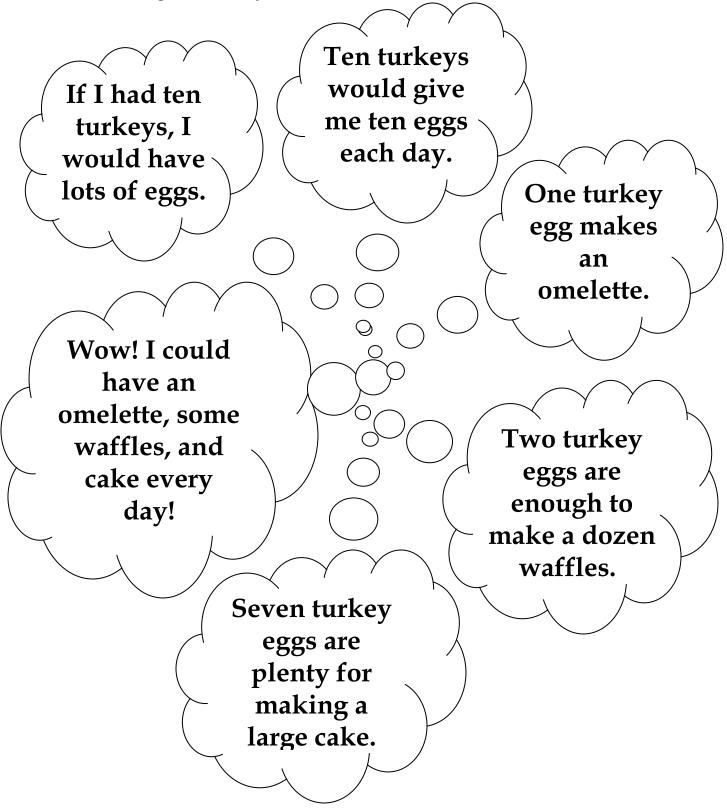
$$490 \div 7 - 23 + 18 \times 9 =$$

$$480 \div 8 + 89 \times 7 =$$

$$94 + 51 \times 8 - 720 \div 90 =$$

BLM 6.N.9.6: Tina's Ten Turkeys

Tina thought one day:



BLM 6.N.9.6: Tina's Ten Turkeys (continued)

Week 1

Tina thought of making:

- every day, an omelette for herself
- on Friday, two dozen waffles to feed the family
- on Sunday, a cake to celebrate

Week 2

Tina thought of making:

- on Monday, Tuesday, Thursday and Saturday, an omelette for herself and an omelette for her brother
- on Wednesday and Friday, two dozen waffles to feed the family
- on Sunday, a cake to celebrate

BLM 6.PR.1: Pattern Introduction

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BLM 6.PR.2: Horizontal Table #1

Term	1	2	3	4	5
Number of Tiles	3	5	7	9	11

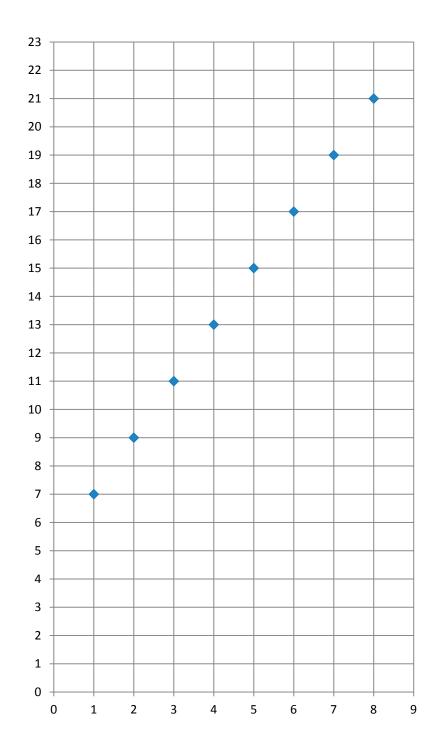
BLM 6.PR.3: Horizontal Table #2

Term	1	2	3	4			7	8	9
Term Value	9	19	29		49	59		87	91

BLM 6.PR.4: Vertical Table #1

As Brigitte walked into Mr. Xeno's classroom, she noticed something strange on his desk. When she got closer, this is what she saw:

Term	Term Value
1	1
2	4
3	7
	10
5	
6	
	19
	22
100	





BLM 6.PR.7: Mrs. Dean's Carpet

Mrs. Dean went to a carpet store and told the salesman that she needed a carpet for her living room.

The salesman asked Mrs. Dean for the dimensions of her living room.

Mrs. Dean said that her living room was rectangular in shape and the area of her living room was 20 square metres.

"Well, madam," said the salesman, "our carpets come in four different widths: one metre, two metres, two-and-a-half metres, and four metres. Which width do you need?"

"Let me see now." said Mrs. Dean. "I would need 20 metres of the one-metre-wide carpet, 10 metres if I went with the two-metre-wide carpet, but only eight metres of the twoand-a-half-metre-wide carpet, and oh let's see, only five metres of the four-metre-wide carpet. I wonder which one would look the best in my almost square living room."

BLM 6.PR.8: Poff and Gloff's Math Homework

Poff and Gloff are best friends. They even do homework together, but not the same way. In fact, you can say that they do their math homework very differently.

Yesterday, their teacher gave them a math homework sheet with two long columns of numbers and said, "Add each pair of numbers and find the answer for each row."

Poff and Gloff looked at their homework sheets and made the following statements:

Poff said "I think we start with the left number and add the right one to it."

"No, Poff," said Gloff "I think we start with the number in the right column and add the number from the left column to it."

- 1. Check Poff's work for correctness, and use a mathematical expression to represent his work.
- 2. Check Gloff's work for correctness, and use a mathematical expression to represent his work.
- 3. Compare their work. (Did they get the same answer or different answers? How is that possible?)
- 4. Develop a general equation based on your observations and explain why you think it is so.

а	b	Poff's Work	Gloff's Work
2	9	2 + 9 = 11	9 + 2 = 11
4	9	4 + 9 = 13	9 + 4 = 13
6	8	6 + 8 = 14	8 + 6 = 14
8	5	8 + 5 = 13	5 + 8 = 13
9	5	9 + 5 = 14	5 + 9 = 14
5	5	5 + 5 =10	5 + 5 = 10
14	3	14 + 3 = 17	3 + 14 = 17
1	7	1 + 7 = 8	7 + 1 = 8
8	9	8 + 9 = 17	9 + 8 = 17
12	1	12 + 1 = 13	1 + 12 = 13
6	7	8 + 7 = 15	7 + 8 = 15

BLM 6.PR.8: Poff and Gloff's Math Homework (continued)

BLM 6.PR.9: Equation Pairs

Mini said that there are two different ways you can write an equation of an area. What do you think her two equations were for the following measurements?

Width	Length	Equation 1	Equation 2
3 m	2 m		
6 km	8 km		
8 km	9 km		
9 cm	5 cm		
5 m	7 m		
4 m	3 m		
3 km	9 km		
9 cm	7 cm		
7 km	8 km		
6 m	7 m		

BLM 6.PR.10: Baskets and Oranges

Number of Baskets	1	2	3	4	5	6	7
Number of Oranges	7	14	21	28	35	42	49

BLM 6.PR.11: Equivalent Forms of an Equation

Write four equivalent forms of this equation: 4w = 12.

- a) Add 8 to each side.
- b) Subtract 5 from each side.
- c) Multiply each side by 3.
- d) Divide each side by 4.

Use buttons to verify your work.

		1
I have	I have	I have
5x = 2.	6t + 3 = 3.	7q - 2 = 3 - 2.
Who has $6t = 0$?	Who has 7q = 3?	Who has $2w = 9$?
I have	I have	I have
2w + 7 = 16.	3e = 1.	r + 12 = 4 + 12.
Who has $9e = 3?$	Who has $r = 4$?	Who has $7m = 3$?
I have	I have	I have
7m + 3 = 6.	6 <i>n</i> = 1.	6b = 1.
Who has $18n = 3?$	Who has 24 <i>b</i> = 4?	Who has $7z + 3 = 3$?
I have 7z = 0. Who has $4w + 3 =$ 5?	I have 4w = 2. Who has $10v = 7$?	I have 10v + 8 = 7 + 8. Who has $s = 7$?
I have	I have	I have
6s + 8 = 15.	16c = 6.	16d = 12.
Who has $8c = 3?$	Who has $4d = 3?$	Who has $8u = 11?$
I have	I have	I have
8u - 7 = 4.	w = 8.	5f = 1.
Who has $9w = 72$?	Who has $25f = 5$?	Who has $48g = 6$?

BLM 6.PR.12: I Have,	Who	Has	 .?
(continued)			

I have	I have	I have
8g = 1.	7q + 3 = 11.	12x - 2 = 1.
Who has $7q = 8$?	Who has $12x = 3$?	Who has $15f = 60$?
I have	I have	I have
$15f \div 3 = 60 \div 3$.	y = 3.	j + 13 = 23 + 13.
Who has $13y = 39$?	Who has $j = 23$?	Who has $9u = 63$?
I have	I have	I have
u = 7.	150z = 30.	4h = 1.
Who has $15z = 3$?	Who has 28 <i>h</i> = 7?	Who has $25p = 125$?
I have	I have	I have
p = 5.	n = 4.	5k + 100 = 115.
Who has $17n = 68$?	Who has $5k = 15$?	Who has $9g = 99?$
I have g = 11. Who has $f = 13$?	I have $f - 3 = 10$. Who has $29p = 53$?	I have 29p - 30 = 53 - 30. Who has $14a = 28?$
I have 14a + 3 = 31. Who has $7v - 200 =$ 300?	I have 7v = 500. Who has $96n = 32?$	I have 3n = 1. Who has $50x = 20$?

BLM 6.PR.13: Same As Cards

3x + 7 = 3 + 7	3x - 3 = 3 - 3	5(3x) = 5(3)	$3x \div 3 = 3 \div 3$
3x + 7 = 10	3x - 3 = 0	15 <i>x</i> = 15	<i>x</i> = 1
4x + 4 = 36 + 4	4x - 8 = 36 - 8	3(4x) = 3(36)	$4x \div 2 = 36 \div 2$
4x + 4 = 40	4x - 8 = 28	12x = 108	2 <i>x</i> = 18
5x + 9 = 35 + 9	5 <i>x</i> – 6 = 35 – 6	2(5x) = 2(35)	$5x \div 5 = 35 \div 5$
5x + 9 = 44	5x - 6 = 29	10x = 70	<i>x</i> = 7
6 <i>x</i> + 14 = 48 + 14	6 <i>x</i> – 5 = 48 – 5	5(6)x = 5(48)	$6x \div 6 = 48 \div 6$
6x + 14 = 62	6x - 5 = 43	30x = 240	<i>x</i> = 8

BLM 6.PR.13: Same As Cards (continued)

7x + 9 = 42 + 9	7x - 8 = 42 - 8	3(7x) = 3(42)	$7x \div 7 = 42 \div 7$
7x + 9 = 51	7x - 8 = 34	21 <i>x</i> = 126	<i>x</i> = 6
8x + 7 = 56 + 7	8x - 7 = 56 - 7	2(8x) = 2(56)	$8x \div 8 = 56 \div 8$
8x + 7 = 63	8x - 7 = 49	16x = 112	<i>x</i> = 7
9x + 5 = 99 + 5	9x - 7 = 99 - 7	3(9x) = 3(99)	$9\chi \div 9 = 99 \div 9$
9x + 5 = 104	9x - 7 = 92	27x = 297	<i>x</i> = 11
8 <i>x</i> + 13 = 12 + 13	8x - 9 = 12 - 9	3(8x) = 3(12)	$8x \div 4 = 12 \div 4$
8x + 13 = 25	8x - 9 = 3	24 <i>x</i> = 36	2x = 3

BLM 6.PR.14: Same As Reply Sheet A

3x = 3	3x + 7 = 3 + 7	3x - 3 = 3 - 3	5(3x) = 5(3)
	3x + 7 = 10	3x - 3 = 0	15 <i>x</i> = 15
4 <i>x</i> = 36	4x + 4 = 36 + 4	4x - 8 = 36 - 8	3(4x) = 3(36)
	4x + 4 = 40	4x - 8 = 28	12x = 108
5 <i>x</i> = 35	5x + 9 = 35 + 9	5 <i>x</i> – 6 = 35 – 6	2(5x) = 2(35)
	5x + 9 = 44	5 <i>x</i> – 6 = 29	10x = 70
6 <i>x</i> = 48	6x + 14 = 48 + 14	6x - 5 = 48 - 5	5(6)x = 5(48)
	6x + 14 = 62	6x - 5 = 43	30x = 240

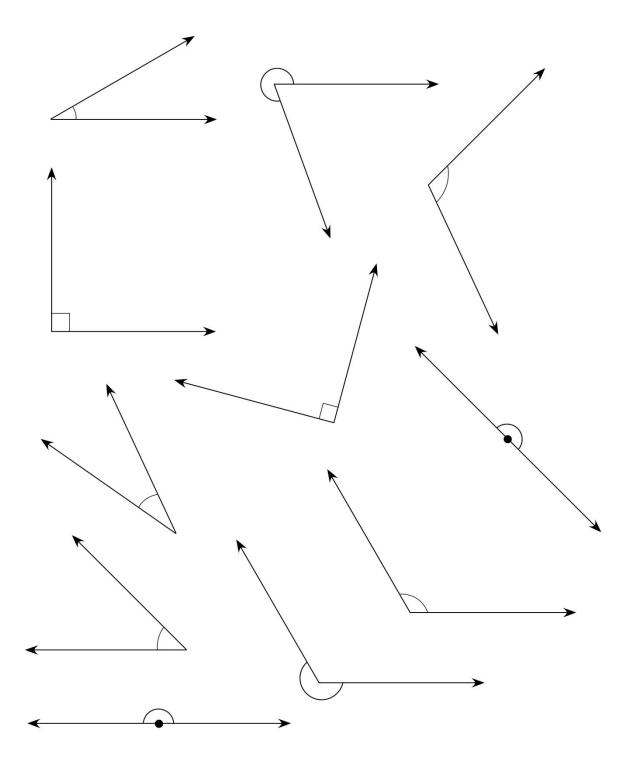
BLM 6.PR.14: Same As Reply Sheet A

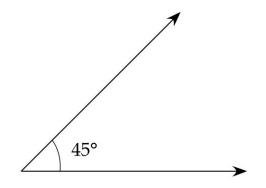
3x = 3	3x + 7 = 3 + 7	3x - 3 = 3 - 3	5(3x) = 5(3)
	3x + 7 = 10	3x - 3 = 0	15 <i>x</i> = 15
4 <i>x</i> = 36	4x + 4 = 36 + 4	4x - 8 = 36 - 8	3(4x) = 3(36)
	4x + 4 = 40	4x - 8 = 28	12x = 108
5 <i>x</i> = 35	5x + 9 = 35 + 9	5 <i>x</i> – 6 = 35 – 6	2(5x) = 2(35)
	5x + 9 = 44	5 <i>x</i> – 6 = 29	10x = 70
6 <i>x</i> = 48	6x + 14 = 48 + 14	6x - 5 = 48 - 5	5(6)x = 5(48)
	6x + 14 = 62	6x - 5 = 43	30x = 240

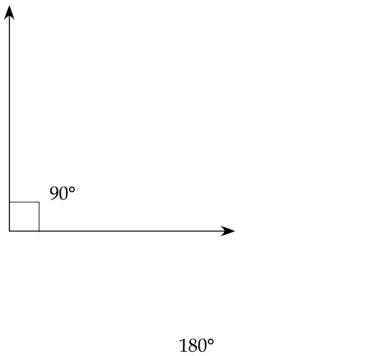
BLM 6.PR.15: Same As Reply Sheet B

7x = 42	7x + 9 = 42 + 9	7x - 8 = 42 - 8	3(7x) = 3(42)
	7x + 9 = 51	7x - 8 = 34	21 <i>x</i> = 126
8 <i>x</i> = 56	8x + 7 = 56 + 7	8x - 7 = 56 - 7	2(8x) = 2(56)
	8x + 7 = 63	8x - 7 = 49	16 <i>x</i> = 112
9 <i>x</i> = 99	9x + 5 = 99 + 5	9x - 7 = 99 - 7	3(9x) = 3(99)
	9x + 5 = 104	9x - 7 = 92	27 <i>x</i> = 297
8 <i>x</i> = 12	8 <i>x</i> + 13 = 12 + 13	8x - 9 = 12 - 9	3(8x) = 3(12)
	8x + 13 = 25	8x - 9 = 3	24 <i>x</i> = 36

BLM 6.PR.16: Same As Record Sheet









BLM 6.SS.1.3: Sum of Interior Angles of a Triangle

Triangle Name	Interior Angle Measures (° +° +°)	Sum of Interior Angles of Triangle

BLM 6.SS.1.4: Sum of Interior Angles of a Quadrilateral

Quadrilateral Name	Interior Angle Measures (° +° +° +°)	Sum of Interior Angles of Quadrilateral

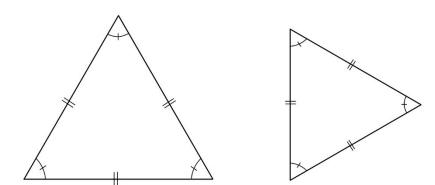
BLM 6.SS.2.3: Sides for Flexible Quadrilaterals

Small for Parallelogram P 1	Small for Parallelogram P 1	
Small for Parallelogram P 2	Small for Trapezoid T 1	
Small for Parallelogram P 2	Small for Trapezoid T 1	
Small for Parallelogram P 2	Small for Trapezoid T 2	
Small for Parallelogram P 2	Small for Trapezoid T 2	

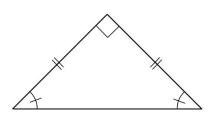
Medium for Trapezoid T 2

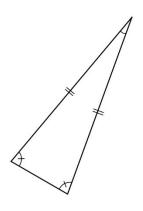
Large for Parallelogram P 1
Large for Parallelogram P 1
Large for Trapezoid T 1
Large for Trapezoid T 2
Large for Trapezoid T 1

Equilateral

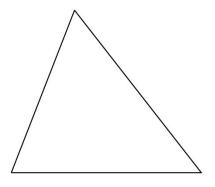


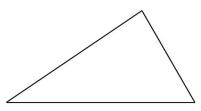
Isosceles



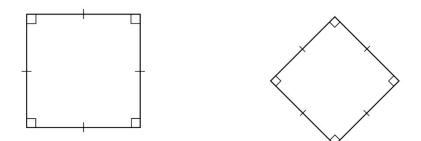


Scalene

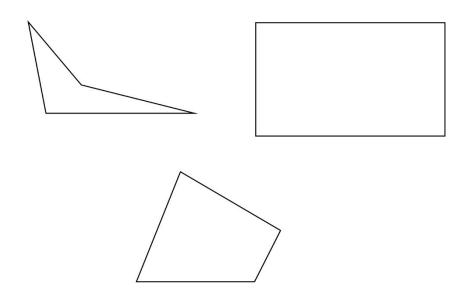




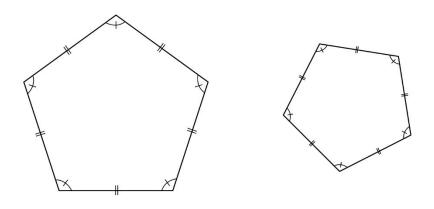
Regular Quadrilaterals



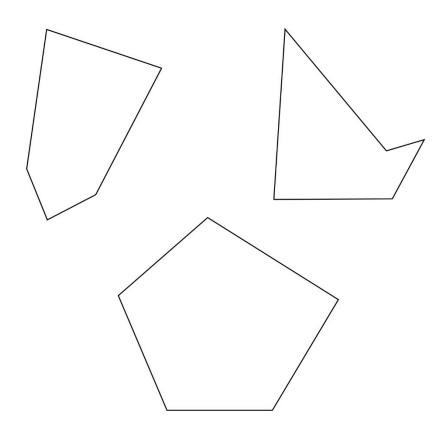
Irregular Quadrilaterals



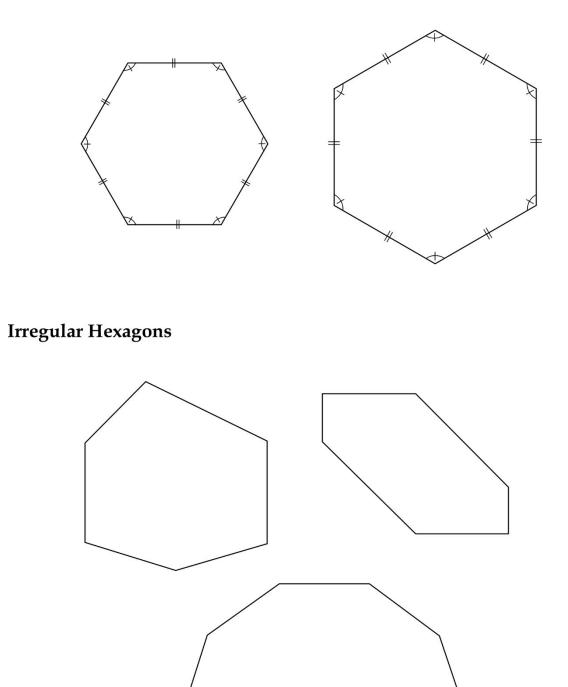
Regular Pentagons



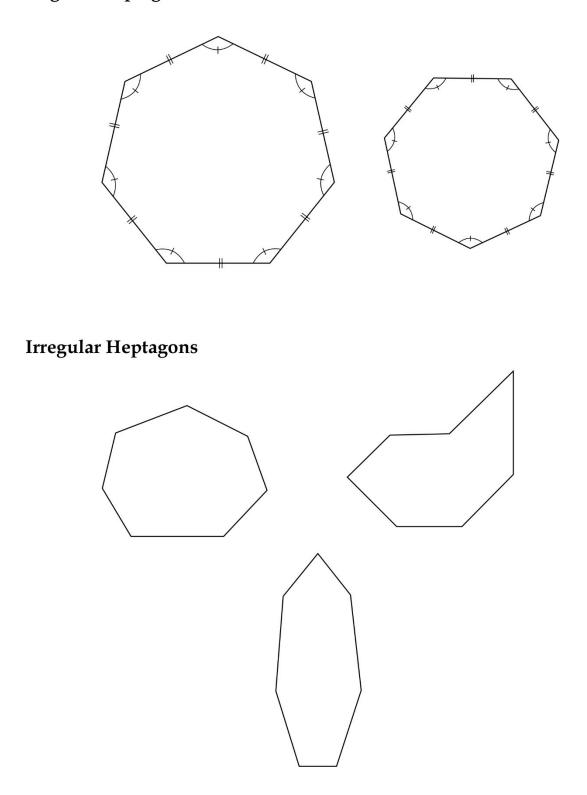
Irregular Pentagons



Regular Hexagons



Regular Heptagons



BLM 6.SS.3.2: Dolly Made a Garden (Perimeter)

Dolly's Mom had a garden. Dolly wanted to have a garden too. Mom gave Dolly five small rocks to build a garden. Dolly made a special garden. She placed a small rock on each corner of her garden. Dolly's garden was an irregular polygon. It had five sides. The length of each side was as follows: 205 cm, 70 cm, 95 cm, 120 cm, and 125 cm.

What is the perimeter of Dolly's garden?

BLM 6.SS.3.3: David's Playroom (Area)

David has a lot of toys. David's Dad told David that they will tile part of the basement floor, and David will be able to use the tiled area as his playroom.

David was watching as his Dad placed eight square tiles side-by-side. Then, his Dad placed a second row of tiles right along the first row. He continued until he had 10 rows of tiles.

David wanted to know how big each tile was. Dad gave him a measuring tape, and said "Each tile is the same size. Measure the length and width of one tile."

David measured the length of the tile. It was 30 cm long. The width looked the same, but he measured it to be sure. The width was also 30 cm long. David was happy with the new tiled area.

What is the area of David's tiled playroom?

BLM 6.SS.3.4: Peter's Toy Box (Volume)

Peter wanted to build a toy box. Peter's Dad asked Peter how big he wanted to make his toy box. Peter thought about it.

"I have lots of blocks, cars, and trucks." said Peter.

"Put them all side-by-side." said Peter's Dad. "Now, let's figure out how much space they use up."

Peter looked at his toys, and said "How can we figure out how much space they use up?"

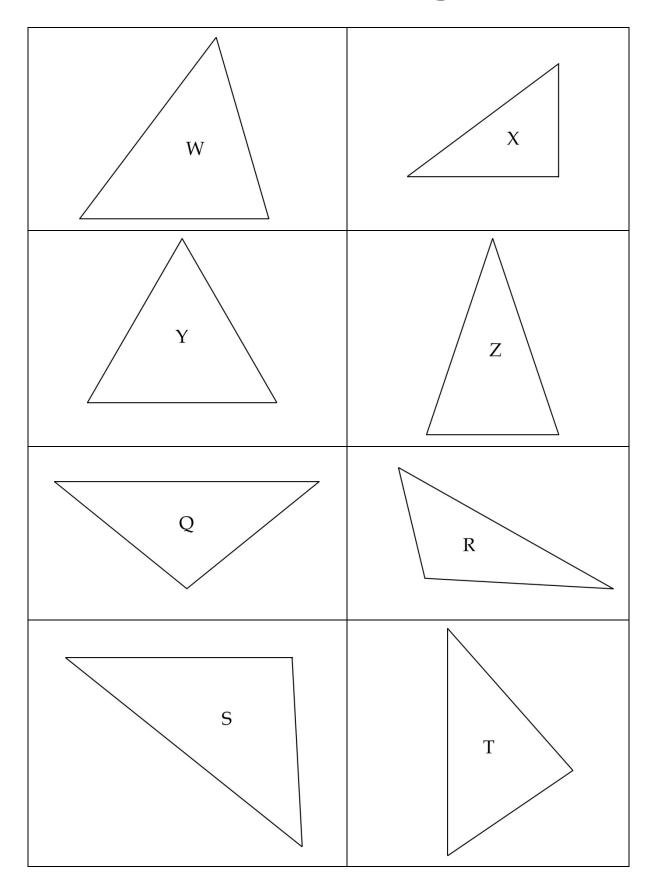
Peter's Dad said "Here is my measuring tape. We are going to use it to measure the length, the width, and the height that these toys take up."

Dad was measuring, and Peter wrote down the dimensions.

Here are the dimensions Peter recorded:

Length: 90 cm Width: 70 cm Height: 50 cm

What does the volume of the new toy box need to be so all the toys will fit in?

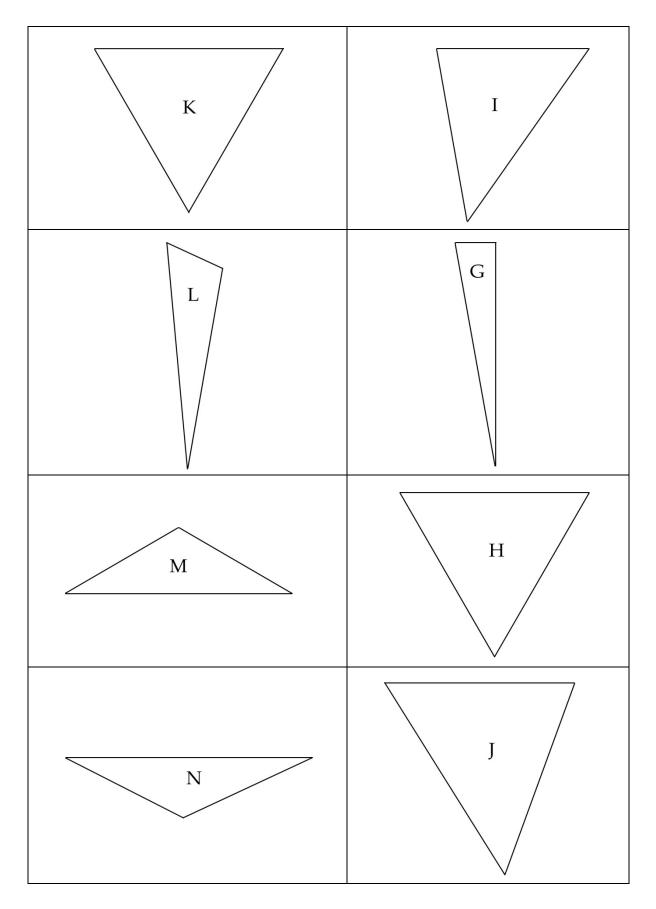


BLM 6.SS.4.1: Cards of Triangles #1

BLM 6.SS.4.2: Sorting of Triangles According to the Length of the Sides

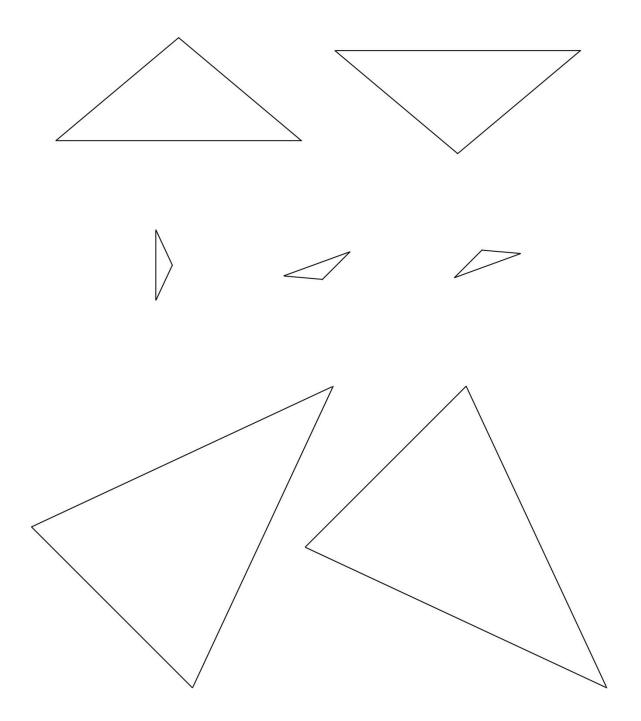
Triangle	Side a	Side b	Side c	Number of Same Lengths (3, 2, none)

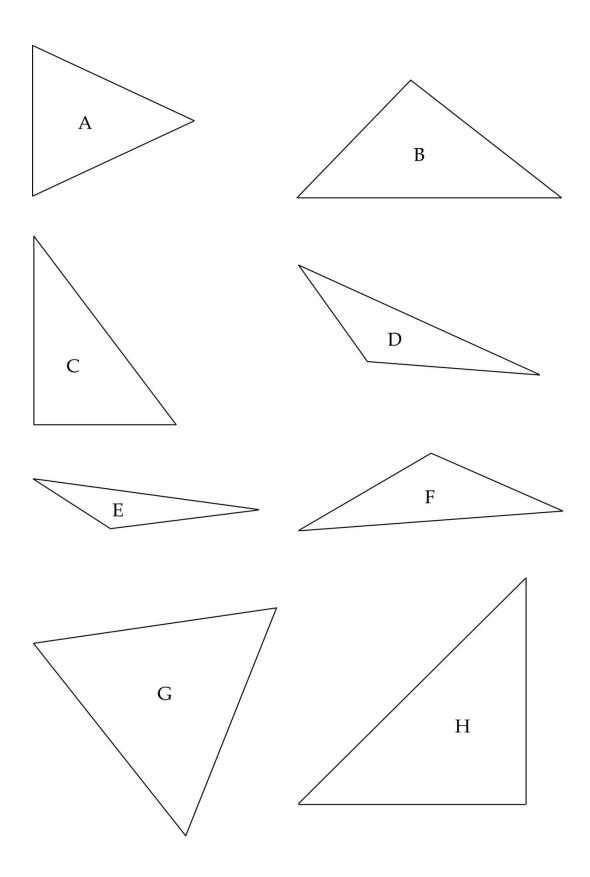
BLM 6.SS.4.3: Cards of Triangles #2

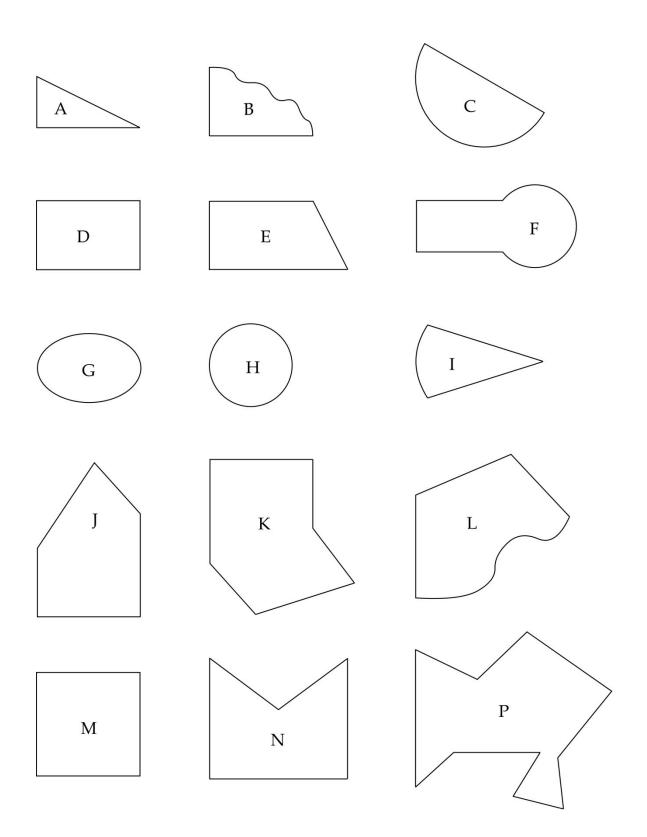


BLM 6.SS.4.4: Sorting of Triangles According to the Measure of Interior Angles

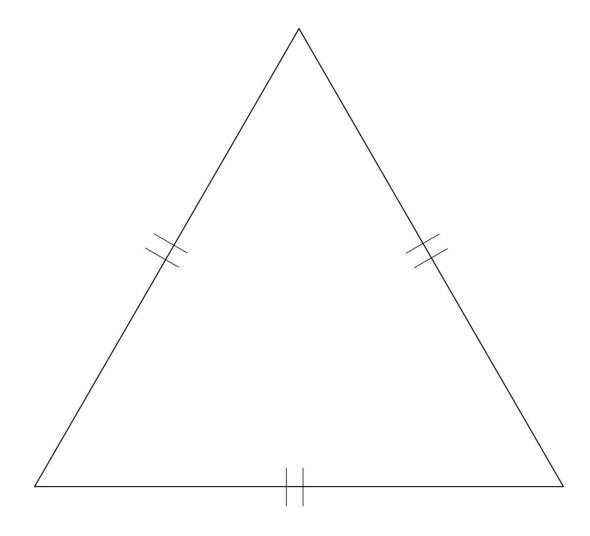
Triangle	Angle A	Angle B	Angle C	Sort the Triangles and Describe the Sorting Rule

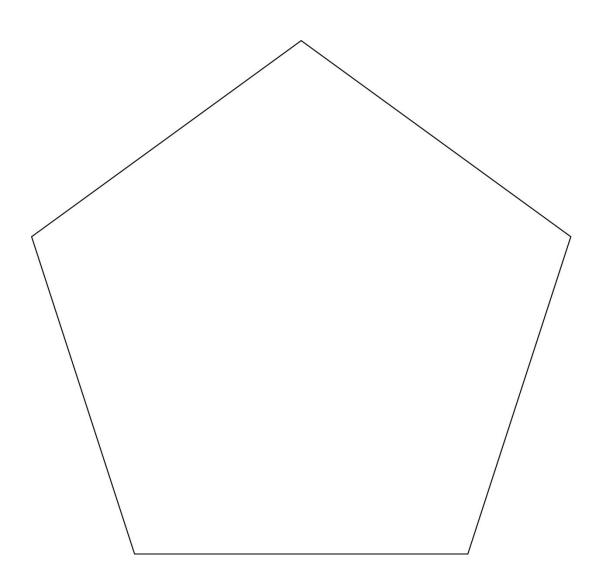




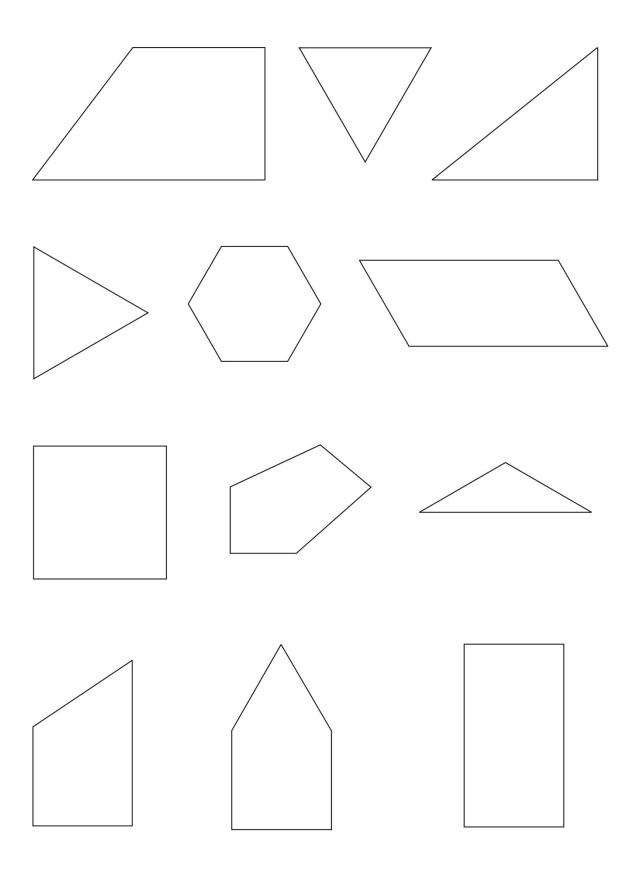


BLM 6.SS.5.2: Equilateral Triangle





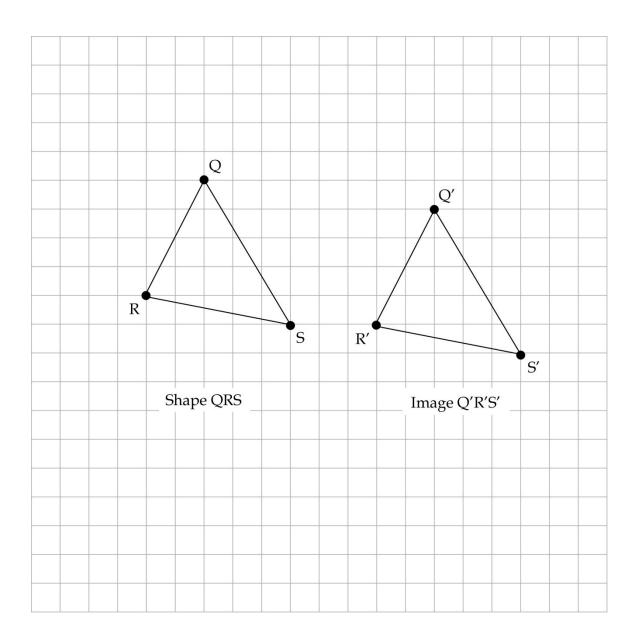
BLM 6.SS.5.4: Polygons: Regular and Irregular



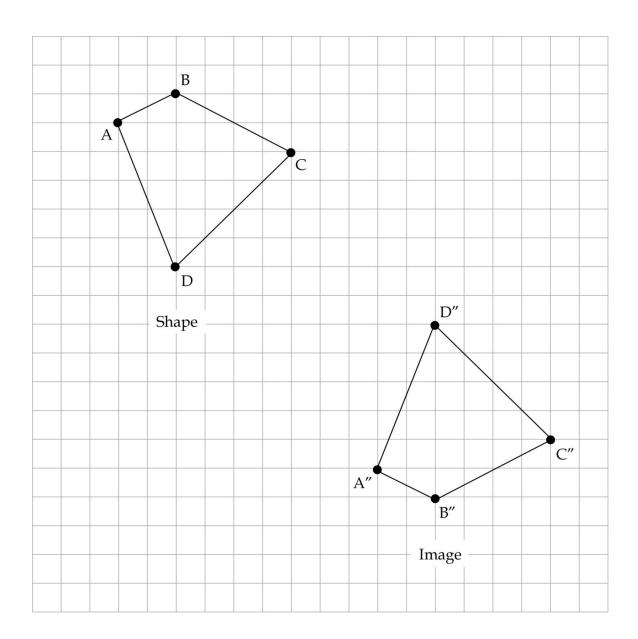
BLM 6.SS.5.5: Am I a Regular Polygon?

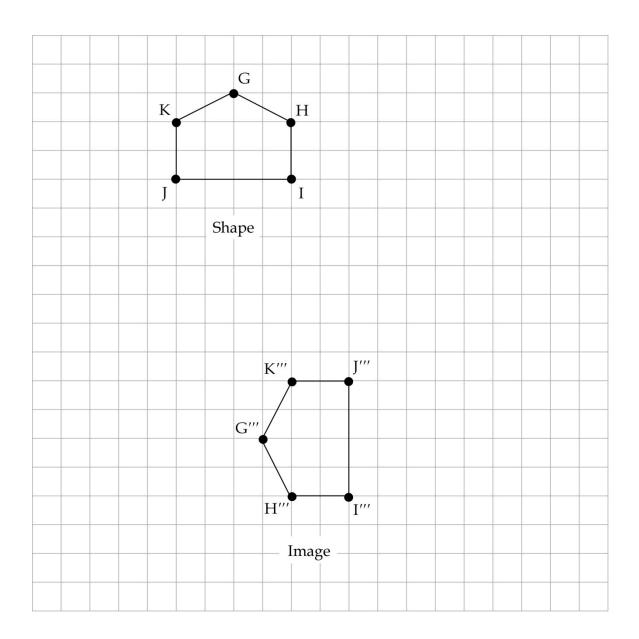
Polygon	Kind	Justification

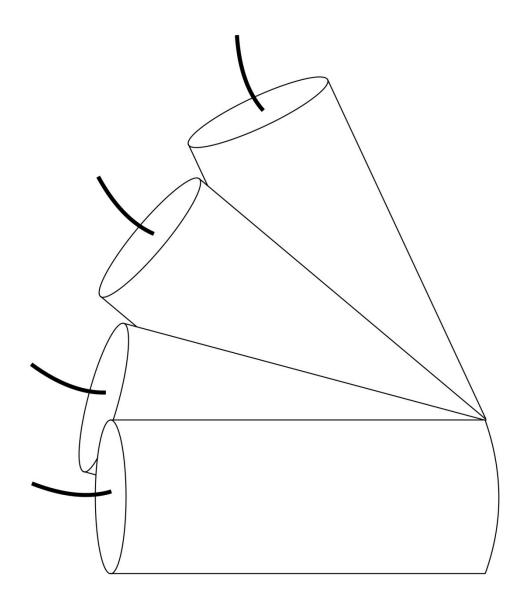


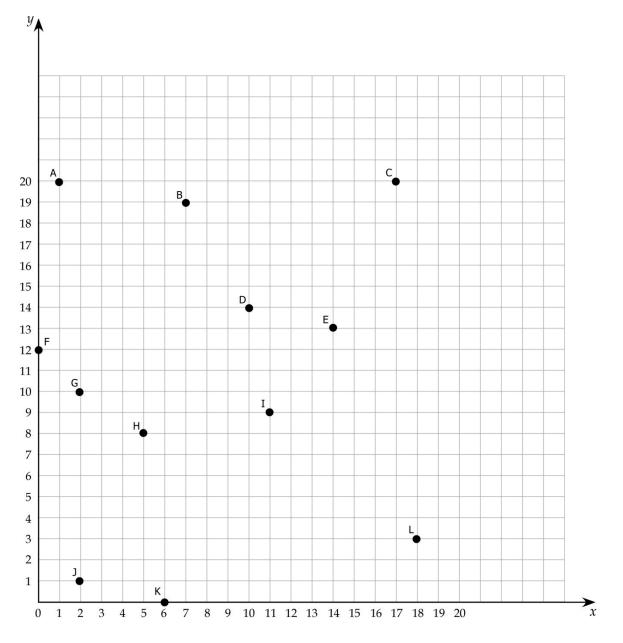






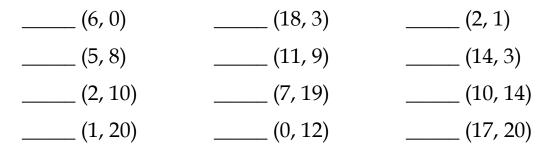




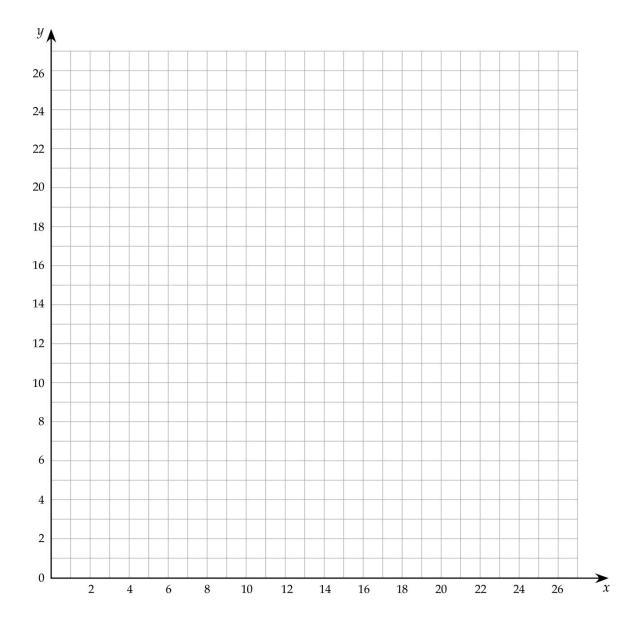


BLM 6.SS.8.1: Matching Game

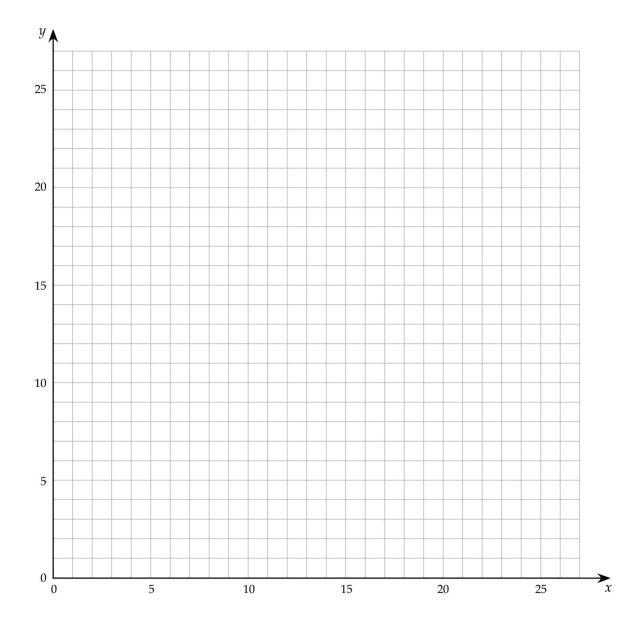
Match each corresponding ordered pair with its letter point.



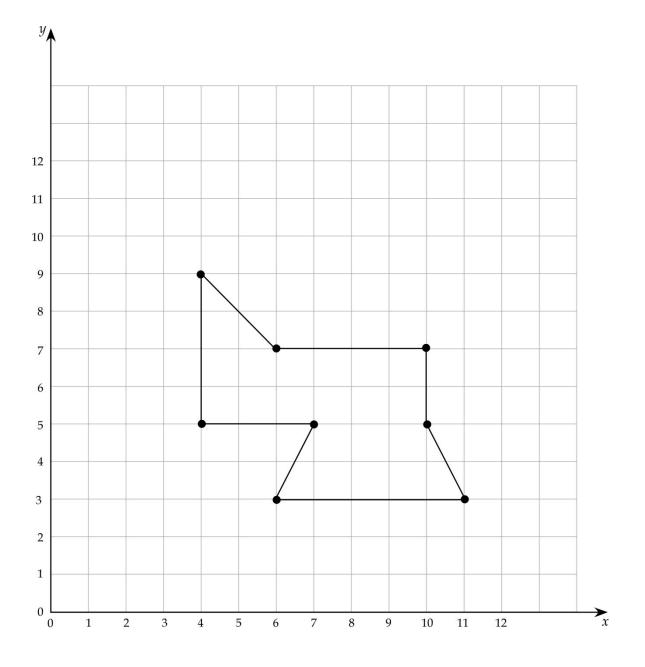


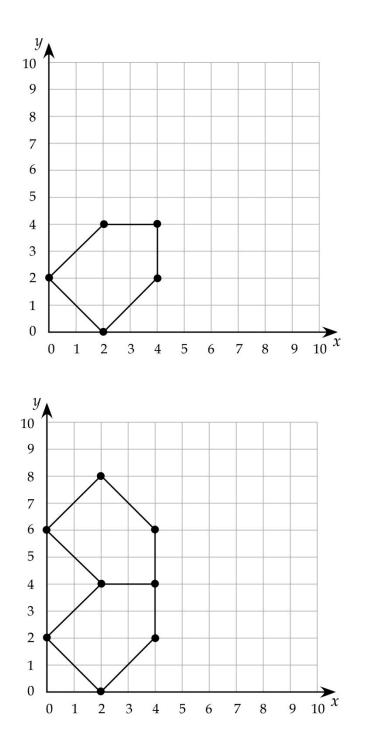












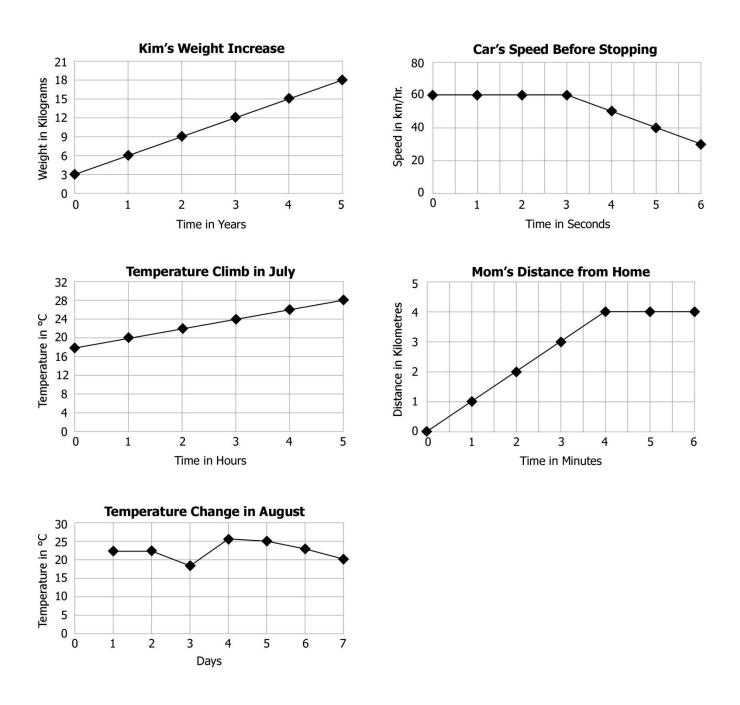
BLM 6.SP.1.3: Prior Knowledge

Mini is doing a project on measurement. First, she measured every object that she possibly could. Then she started observing shadows. Mini noticed that the shadow of her dad's van was not the same size all the time, so she decided to measure it at different times of the day. Here are some of the measurements she took.

10 o'clock in the morning	30 cm long shadow		
11 o'clock in the morning	15 cm long shadow		
12 o'clock, noon	0 cm long shadow		
1 o'clock in the afternoon	15 cm long shadow		
2 o'clock in the afternoon	30 cm long shadow		
3 o'clock in the afternoon	45 cm long shadow		

Mini made a line graph to show her data collection.

- 1. Make a line graph using Mini's shadow measurement data to show what you think Mini's graph looks like.
- 2. Mini used measurements to collect data for her graph. What other methods of collecting data do you know of?
- 3. Why do you think Mini used a line graph?
- 4. How long do you think the shadow was at 10:30 in the morning?
- 5. How long do you think the shadow was at 2:30 in the afternoon?
- 6. If you measured the shadow of your bicycle would the shadow measurements of your bicycle be shorter, the same size, or longer? Explain your answer.



BLM 6.SP.1.4: Common Attributes of Line Graphs

BLM 6.SP.1.5: Timmy's Mom Had a New Baby

Timmy's mom had a new baby. She had to take the baby to the doctor for monthly check-ups. Timmy went too.

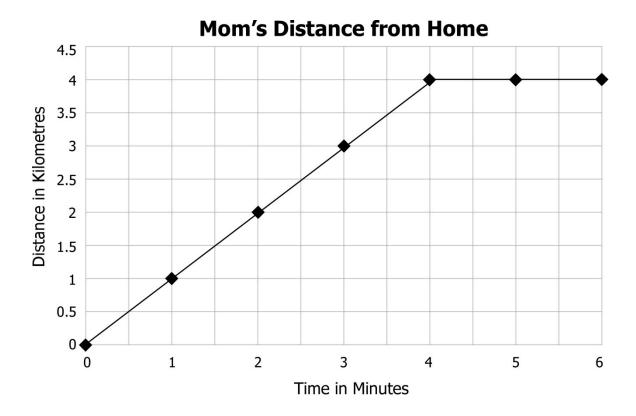
Each time they had a visit, the doctor checked the baby, recorded the baby's height in the baby's medical file, and told mom the baby is doing well.

Timmy wanted to see what the doctor wrote about the baby. The doctor showed Timmy the baby's growth chart. This is what Timmy saw:

Number of Months	1	2	3	4	5
Baby's Height (cm)	48	51	54	57	60

BLM 6.SP.1.6: Grandma's Lilac Bush

Number of Months	0	1	2	3	4	5
Height of Lilac Bush (cm)	40	50	60	70	80	90



BLM 6.SP.1.7: Mom's Distance from Home

BLM 6.SP.1.8: Questions for Data Collection #1

- 1. You want to find out what is the most popular song among your classmates.
- 2. Your teacher wants to find out what is the average time his or her students spend studying at home.
- 3. Your basketball coach wants to find out which player on his team is the tallest.
- 4. You want to find out which was the hottest or coldest day in the last decade.
- 5. Your father wants to know which car is the best to buy based on how much gasoline it uses.
- 6. Your grandmother is planning a large family gettogether, and she wants to find out which four cakes are the family favourites.

BLM 6.SP.1.9: Questions for Data Collection #2

- 1. You want to find out which movie was the most popular in North America in the year 2000.
- 2. For your social studies assignment, your teacher wants you to find out who was the longest-living Prime Minister in Canada.
- 3. Your school principal wants to find out who has the highest marks in mathematics in the school.
- 4. Statistic Canada wants to collect data that will help them figure out the average family income.
- 5. Your gym teacher wants to find out which student can jump the highest.

BLM 6.SP.1.10: Bobby Planted Peas

Bobby's grandmother was planting vegetables in her garden. Bobby also wanted to plant vegetables. Bobby's grandmother let Bobby plant some peas. Bobby was happy.

The following Sunday, when Bobby went to visit his grandmother, he was happy to see tiny little plants all over grandma's vegetable garden.

Grandma said "Bobby, Let's go and measure how tall your peas grew."

Grandma took a ruler, and Bobby and grandma put the ruler next to the peas. The tiny plant was 3 cm tall.

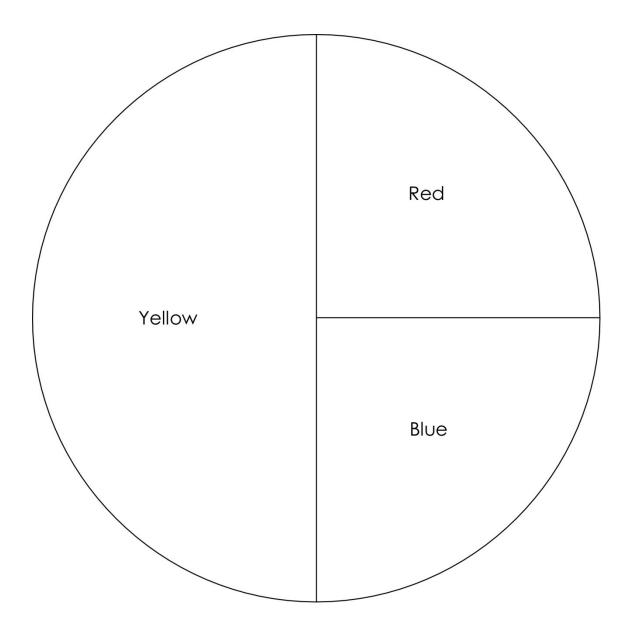
The second Sunday, they measured the peas. The tiny plant grew again. This time it was 6 cm tall.

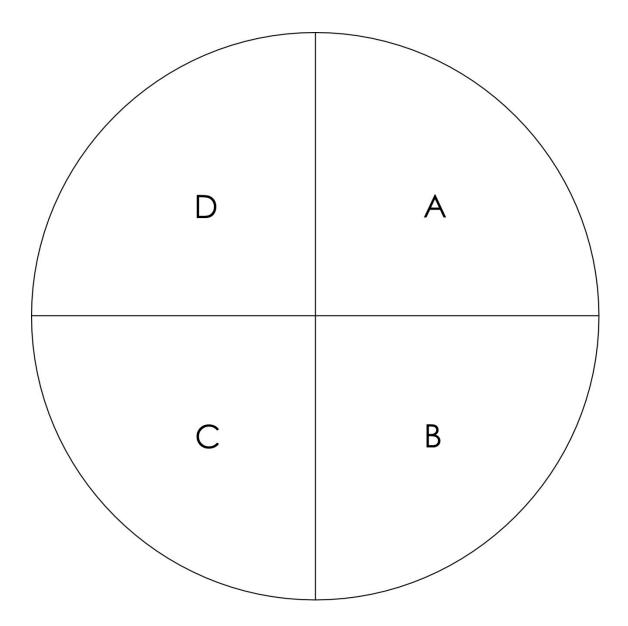
The third Sunday, the tiny plant was 9 cm tall, and on the fourth Sunday it was 12 cm tall. On the fifth Sunday, when Bobby put the ruler next to his little plant, he shouted "Grandma, we can soon have fresh peas! My little plant is 15 cm tall."

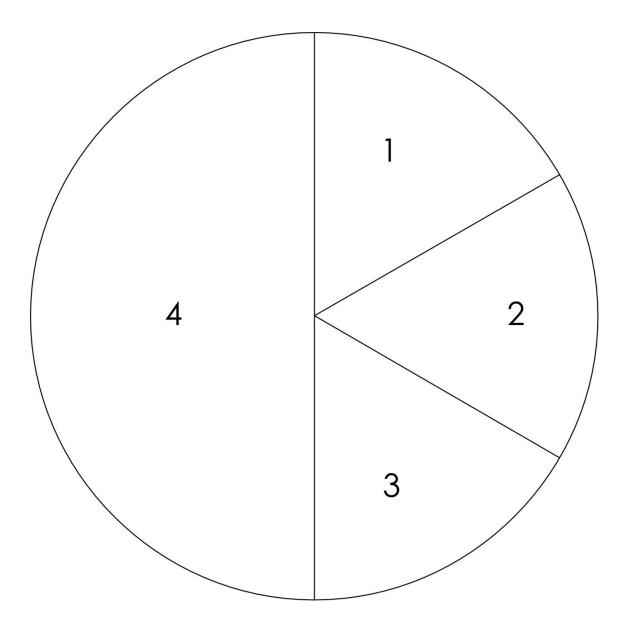
BLM 6.SP.1.11: Data or Not?

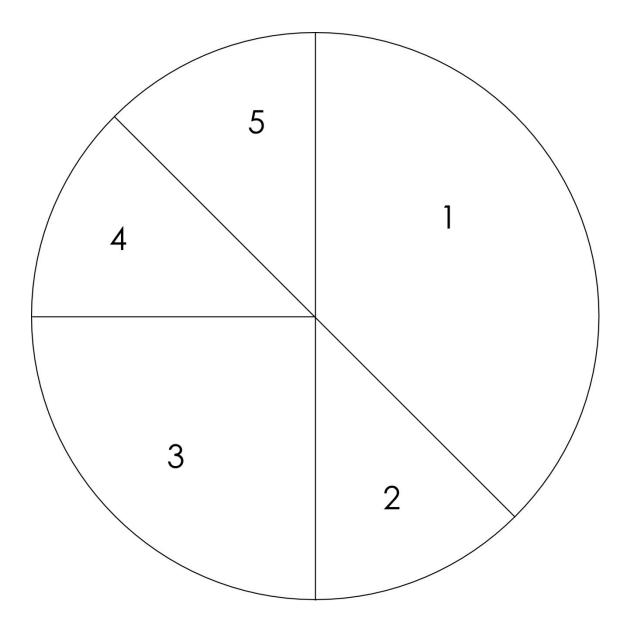
Jimmy's family enjoyed relaxing together after supper. Jimmy's mother loved to do crafts. Jimmy's father liked reading the newspaper, and Jimmy enjoyed playing with his toys.

One evening, Jimmy's father read in the daily newspaper that 30 000 people are unemployed in Lobyville, 50 000 people are unemployed in Sandytown, 15 000 people are unemployed in Sunrizeton, and 38 000 people are unemployed in Tulipville.









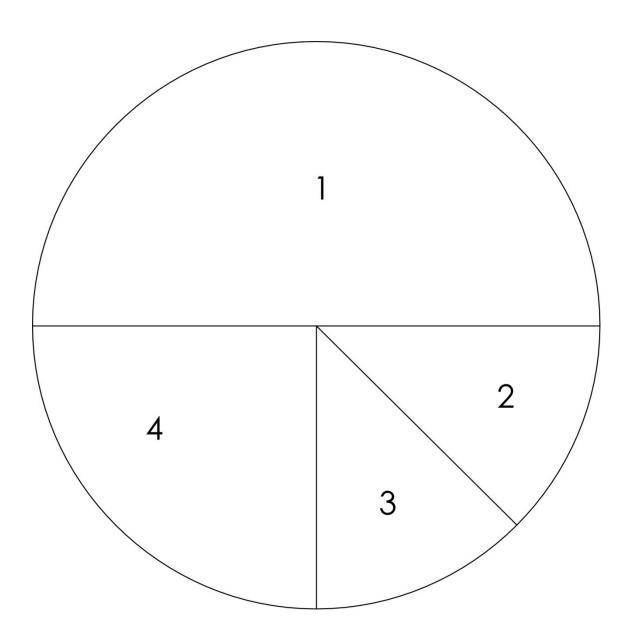
BLM 6.SP.4.5: Probability Bingo

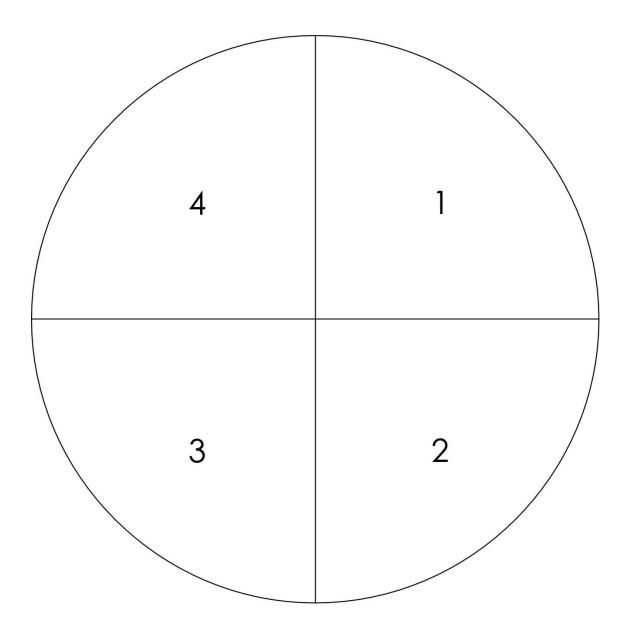
BLM 6.SP.4.6: Record Sheet #1

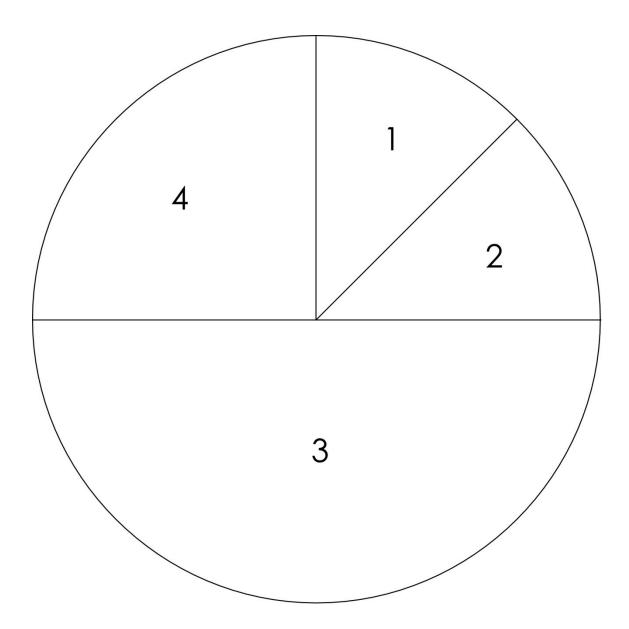
Student	Coin Toss #	Prediction	Experimental Result
	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		

BLM 6.SP.4.7: Record Sheet #2

Group #	Possible Outcome	Theoretical Probability	Tally of Outcomes







BLM 6.SP.4.8: Spinners (continued)

