Simply

Good and Beautiful

MATH 5

EXTRA PRACTICE WORKSHEETS

TABLE OF CONTENTS

NOTE TO PARENTS

This book contains an Extra Practice Worksheet for each lesson that has new content in the Math 5 Course Book. Reviews, assessments, and special lessons do not have Extra Practice Worksheets. Extra Practice Worksheets are designed to be used for lessons in which a student struggled or to review certain concepts before or after an assessment. Parents may choose which Extra Practice Worksheets a student completes and when.

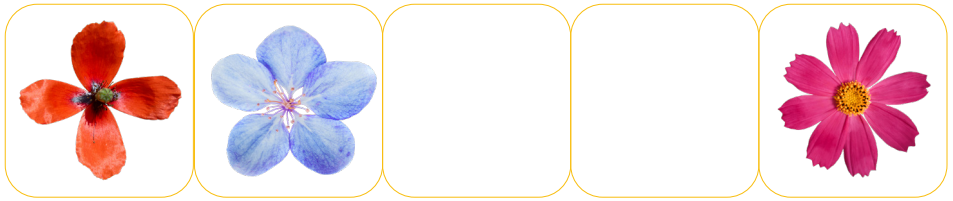
Lesson 1

NUMBER PATTERNS

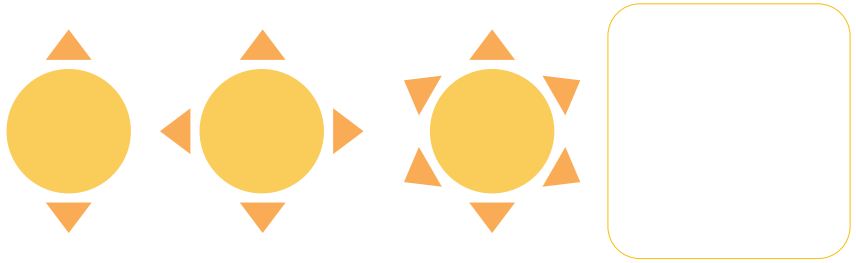
1. Write a sequence of even numbers starting with 6.

_____, _____, _____, _____, _____, _____, _____

2. Count the number of petals on each flower to find the number pattern. Then draw the two missing pictures. Use your imagination!



3. Draw a picture to finish the pattern.



4. Complete each sequence and state the rule for each pattern.

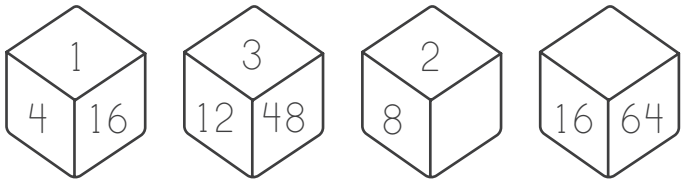
a. 88, 99, 110, _____, _____, _____, _____

rule: _____

b. 40, 36, 32, _____, _____, _____, _____

rule: _____

5. Fill in the missing numbers.



6. Write a sequence of odd numbers starting at 15 and ending with 29.

_____, _____, _____, _____, _____, _____, _____, _____

Lesson 3

DIVISIBILITY STRATEGIES

EXTRA PRACTICE WORKSHEET

1. Use the strategy of your choice to answer the following questions.
Note: Refer to the Divisibility Rules in the Reference Chart.

a. **Circle** the numbers that are divisible by 3.

107 256 360 1,053 2,015

b. **Cross out** the numbers that are divisible by 4.

150 112 360 1,064 4,128

c. **Underline** the numbers that are divisible by 5.

35 48 360 1,050 7,024

d. **Box** the numbers that are divisible by 6.

58 72 90 105 210

2. Suppose you are hosting a party and want to give away stickers as party favors. You invited 6 friends and bought a pack of 180 stickers.

a. Is it possible to give each friend the same number of stickers?

_____

b. How many stickers will each friend get?

_____

c. If 3 more friends come to the party, is it still possible to give each friend an equal number of stickers?

_____

d. How many stickers will each friend get?

_____

3. Use the strategy of your choice to find all the factor pairs of each of the following numbers. Then write the factors in order from least to greatest.

Number	Factor Pairs	Factors
12		
24		
36		
60		

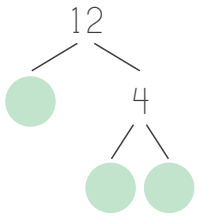
Lesson 4

PRIME FACTORIZATION

EXTRA PRACTICE WORKSHEET

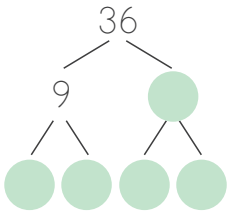
Complete each of the factor trees below. Circle all the prime numbers. At the bottom of each tree, list the prime numbers in order from least to greatest to write the prime factorization.

1.



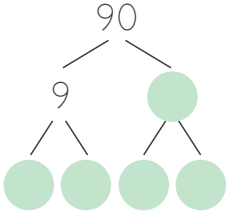
_____ × _____ × _____

2.



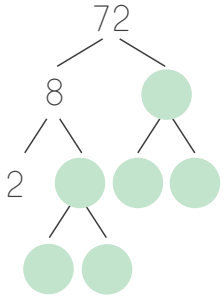
_____ × _____ × _____ × _____

3.



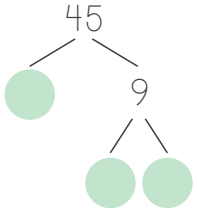
_____ × _____ × _____ × _____

4.



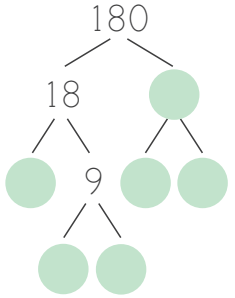
_____ × _____ × _____ × _____ × _____

5.



_____ × _____ × _____

6.



_____ × _____ × _____ × _____ × _____

Lesson 19

ESTIMATING PRODUCTS AND QUOTIENTS USING AREA

1. Estimate the area of each shape. Round the side lengths and multiply them. Don't forget to label your answer with units squared!

a. 19 yd

98 yd

_____ × _____ = _____

b. 42 ft

42 ft

_____ × _____ = _____

c. 11 cm

44 cm

_____ × _____ = _____

2. A rectangular playground's length is 98 ft, and its width is 82 ft. Estimate the area of the playground.

_____

3. Estimate each missing width.

a. area: 408 yd^2
length: 17 yd

estimated width: _____

b. area: 312 ft^2
length: 34 ft

estimated width: _____

Lesson 20

PERFECT SQUARES TO 225 AND LOGIC GAME

EXTRA PRACTICE WORKSHEET

1. Write the square or square root of each number.

a. $\sqrt{169}$ = _____

b. 14^2 = _____

c. $\sqrt{225}$ = _____

d. 15^2 = _____

e. 13^2 = _____

f. $\sqrt{196}$ = _____

2. Complete the multiplication table by filling in the blue boxes with perfect squares.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	2		6	8	10	12	14	16	18	20	22	24	26	28	30
3	3	6		12	15	18	21	24	27	30	33	36	39	42	45
4	4	8	12		20	24	28	32	36	40	44	48	52	56	60
5	5	10	15	20		30	35	40	45	50	55	60	65	70	75
6	6	12	18	24	30		42	48	54	60	66	72	78	84	90
7	7	14	21	28	35	42		56	63	70	77	84	91	98	105
8	8	16	24	32	40	48	56		72	80	88	96	104	112	120
9	9	18	27	36	45	54	63	72		90	99	108	117	126	135
10	10	20	30	40	50	60	70	80	90		110	120	130	140	150
11	11	22	33	44	55	66	77	88	99	110		132	143	154	165
12	12	24	36	48	60	72	84	96	108	120	132		156	168	180
13	13	26	39	52	65	78	91	104	117	130	143	156		182	195
14	14	28	42	56	70	84	98	112	126	140	154	168	182		210
15	15	30	45	60	75	90	105	120	135	150	165	180	195	210	

Lesson 23

GRAPHING ORDERED PAIRS

1. Match each point on the coordinate plane with its ordered pair to find the letter.

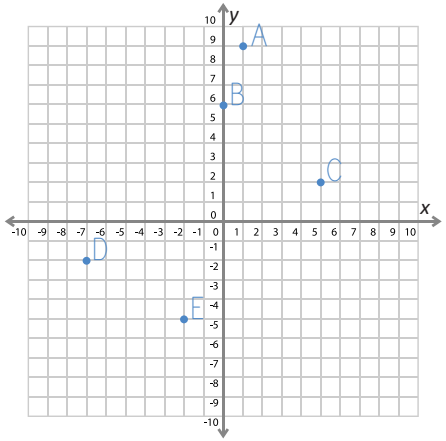
(1, 9) _____

(-2, -5) _____

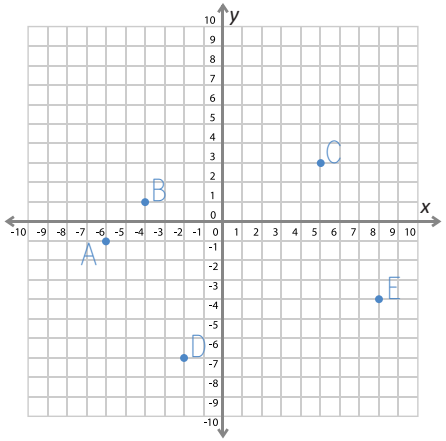
(-7, -2) _____

(0, 6) _____

(5, 2) _____



2. Write the coordinates of each point.



A _____

B _____

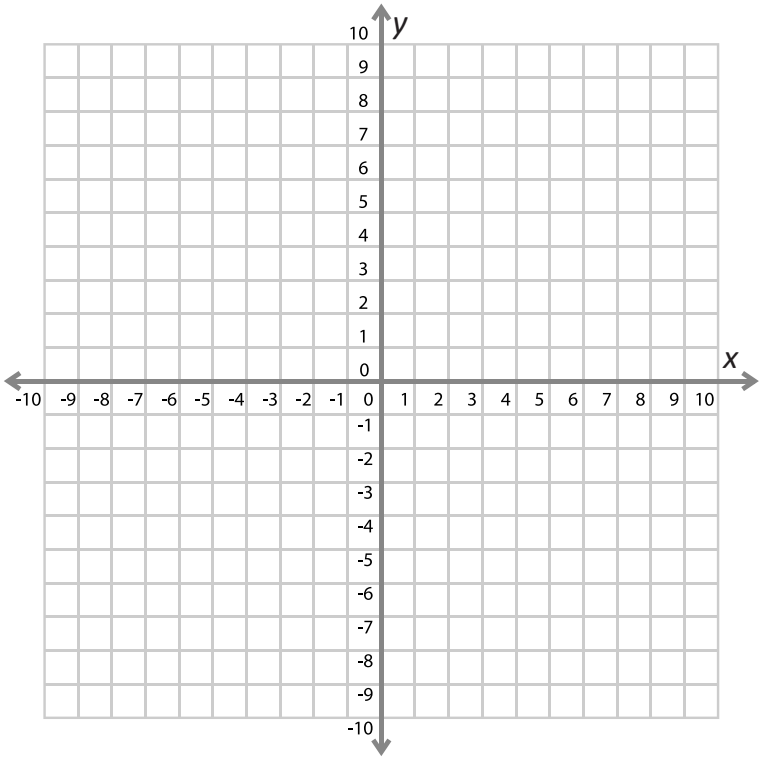
C _____

D _____

E _____

3. Complete the graphing puzzle. Start at the first ordered pair. Plot the point. Plot a point for the next ordered pair and connect the points. Continue plotting and connecting the points in order to draw a picture.

(-8, -3), (-5, -8), (5, -8),
(8, -3), (2, -3), (2, 9),
(-3, 4), (1, 4),
(1, -3), (-8, -3)

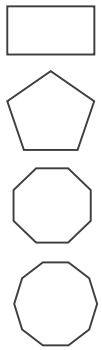


Lesson 25

NAMING GEOMETRIC FIGURES

EXTRA PRACTICE WORKSHEET

1. Match each figure with the correct polygon name.



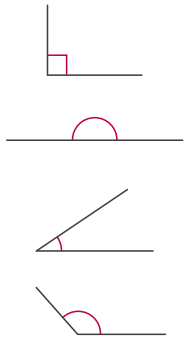
pentagon

decagon

octagon

quadrilateral

2. Match each figure with the correct angle name.



straight

obtuse

right

acute

3. Name each geometric figure using letters.

a. 

_____

b. 

_____

4. Draw the following angles.

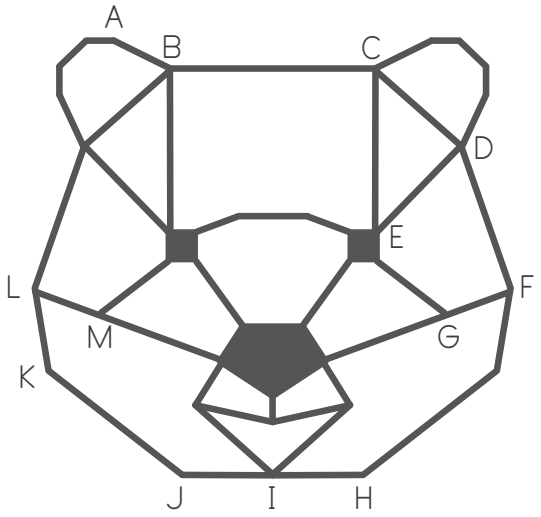
a. acute angle

b. straight angle

c. right angle

d. obtuse angle

5. Using the image, find and name the following geometric figures with the letters shown.



two obtuse angles:
_____ and _____

three line segments:
_____ , _____ ,
and _____

two acute angles:
_____ and _____

one quadrilateral:
_____

one triangle: _____

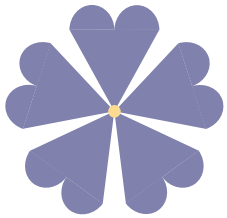
Lesson 33

SYMMETRY AND TRANSFORMATIONS

EXTRA PRACTICE WORKSHEET

1. Draw all lines of symmetry on the shapes below.

a.

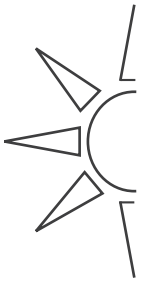


b.

c.

d.

2. Create reflectional symmetry by finishing the object.



3. Show reflectional symmetry by flipping the letters two different ways.

a. A

across a horizontal line:

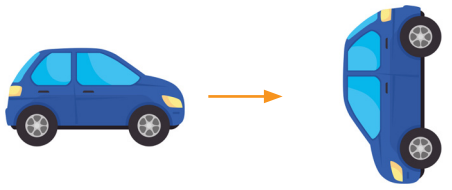
across a vertical line:

b. R

across a horizontal line:

across a vertical line:

4. Name the three transformations needed to get from one car to the next.



Lesson 39

NUMBERS IN THE BILLIONS AND ORDINAL NUMBERS

1. Label the place value chart. Then, using digits, fill in this number: five hundred eleven billion, nine hundred twenty-three million, seven hundred thirty-eight thousand, six hundred forty-five.

Billions			Millions			Thousands			Ones		
		,			,			,			

2. Write 56,001,000,025 in word form.

3. Write each number in standard form.

a. 80,000,000,000 + 7,000,000,000 + 600,000,000 + 50,000,000 + 4,000,000 + 300,000 + 2,000 + 100 + 9

b. six hundred seventy-five billion, nine hundred sixty-eight million, two hundred forty-one thousand, three hundred fifty

4. Write the word form for each ordinal number.

a. 29th

b. 95th

5. The annual Independence Day picnic had 3,247 people in attendance in the fifth year. The total attendees for the previous four years was 15,835. How many people attended the picnic over the first five years?

6. Over five years, the city has set off 3,250 fireworks. If they set off the same number each year, how many fireworks did they set off each year?

PLEASE NOTE

Lesson 40 does not have an Extra Practice Worksheet.

Lesson 68

MULTIPLYING FRACTIONS BY WHOLE NUMBERS

EXTRA PRACTICE WORKSHEET

1. Show multiplication using repeated addition.

a. $3 \times \frac{1}{3} =$ _____

b. $2 \times \frac{2}{7} =$ _____

c. $4 \times \frac{5}{12} =$ _____

2. Multiply by first converting the whole number to a fraction. If the solution is an improper fraction, convert it to a whole number or a mixed number.

a. $\frac{3}{4} \times 5 =$ _____

b. $8 \times \frac{3}{4} =$ _____

c. $3 \times \frac{9}{10} =$ _____

d. $\frac{4}{3} \times 6 =$ _____

3. Determine the answer for each story problem.

a. A kitten's weight was $\frac{5}{8}$ of a pound at birth. Now the kitten weighs 5 times as much. How much does the kitten weigh?

_____

b. Each serving of baked oatmeal uses $\frac{3}{4}$ c of oats. How many cups of oats are needed to make 4 servings of baked oatmeal?

_____

4. Find $\frac{3}{4}$ of each number.

a. $\frac{1}{2}$

b. $\frac{5}{6}$

c. $\frac{2}{5}$

5. Compare the sides and write <, >, or = in the suns between them.

a. $3 \times \frac{7}{6}$ ☀ $\frac{8}{5} \times 4$

b. $\frac{2}{3} \times 8$ ☀ $4 \times \frac{6}{5}$

c. $5 \times \frac{4}{5}$ ☀ $7 \times \frac{1}{2}$

Lesson 70

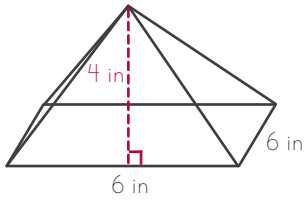
SURFACE AREA OF GEOMETRIC SOLIDS

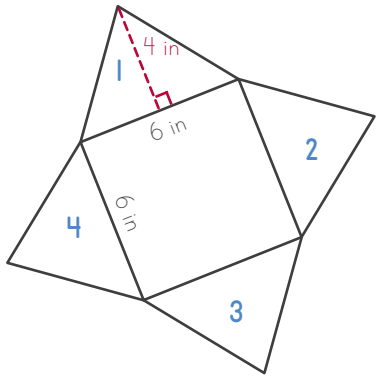
EXTRA PRACTICE WORKSHEET

Area formula for a rectangle: $A = L \times W$

Area formula for a triangle: $A = \frac{bh}{2}$

1. Use the net of the square pyramid to find the surface area.





a. area of the square face: _____

b. area of triangle face 1: _____

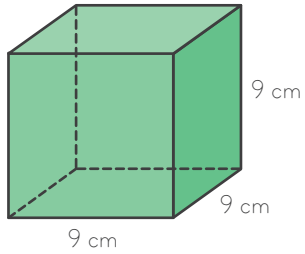
c. area of triangle face 2: _____

d. area of triangle face 3: _____

e. area of triangle face 4: + _____

f. surface area of the square pyramid: _____

2. Use the measurements given to find the area of each face. Then add all the areas to find the surface area of the cube.



a. area of square 1: _____

b. area of square 2: _____

c. area of square 3: _____

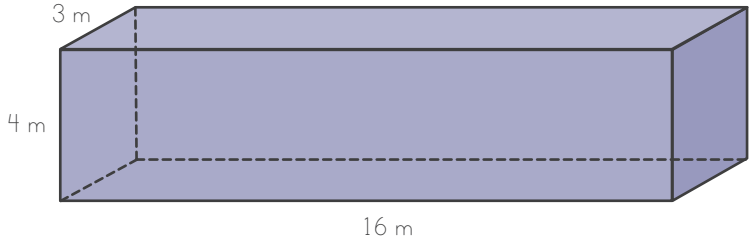
d. area of square 4: _____

e. area of square 5: _____

f. area of square 6: + _____

g. surface area of the cube: _____

3. Find the surface area of the rectangular prism.



_____

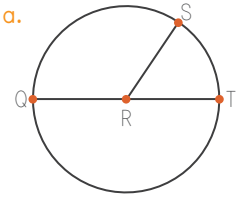
Lesson 85

CIRCLES

EXTRA PRACTICE WORKSHEET

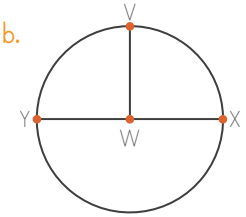
1. Name each circle, two different radii on each circle, and one diameter.

a.



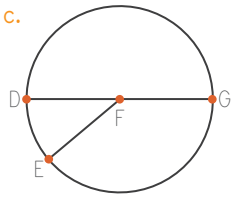
circle: _____
radii: _____
diameter: _____

b.



circle: _____
radii: _____
diameter: _____

c.



circle: _____
radii: _____
diameter: _____

2. Use the diameter to find the radius.

a. diameter = 30 m

radius = _____

b. diameter = 7 in

radius = _____

c. diameter = 86 cm

radius = _____

3. Use the radius to find the diameter.

a. radius = 28 cm

diameter = _____

b. radius = 8.3 yd

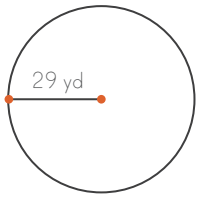
diameter = _____

c. radius = 1.75 km

diameter = _____

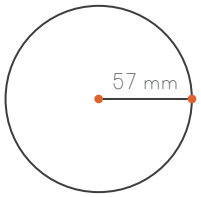
4. Write the measurements of the radius and diameter of each circle.

a.



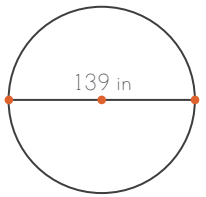
radius = _____
diameter = _____

b.



radius = _____
diameter = _____

c.



radius = _____
diameter = _____

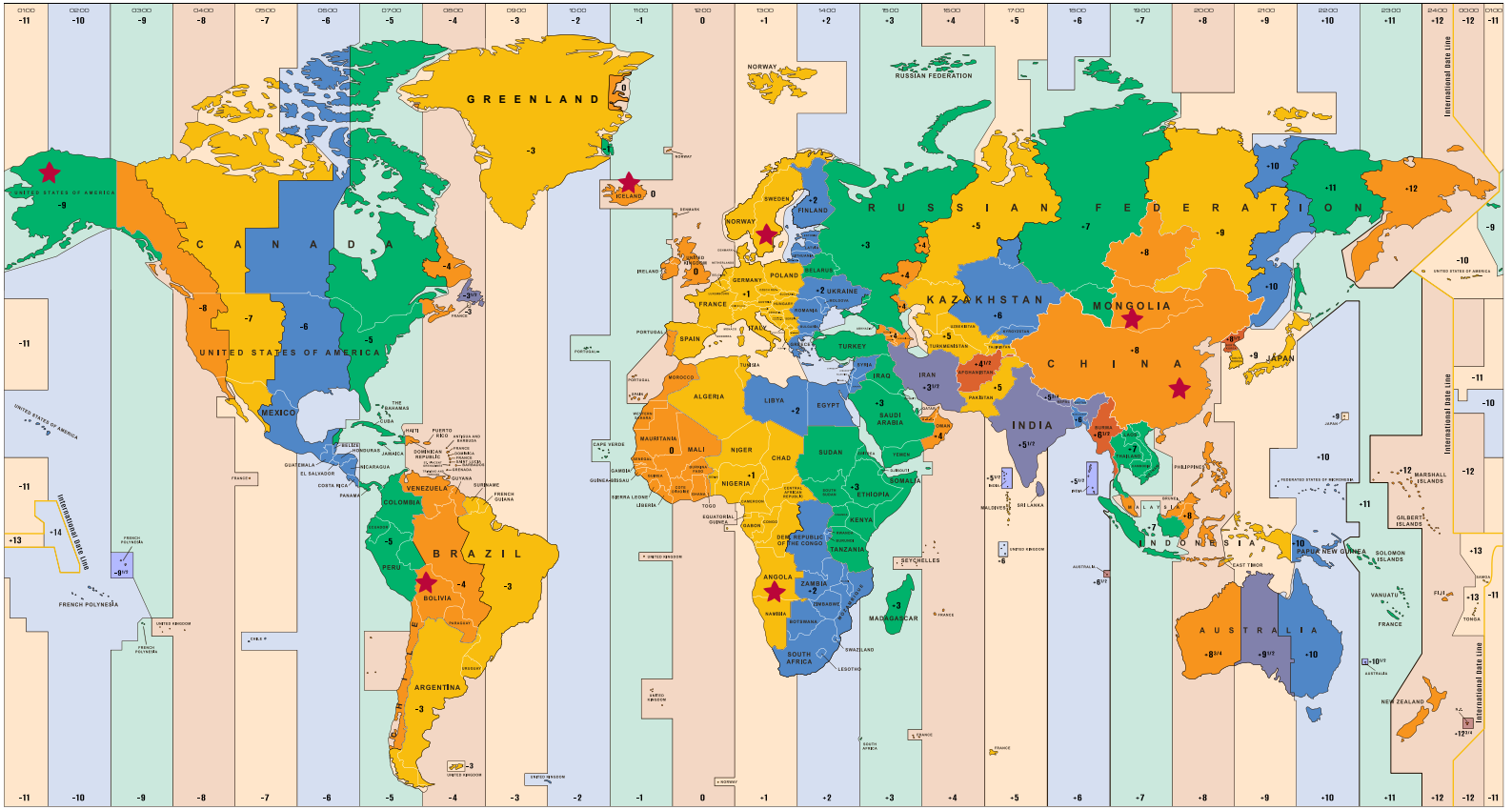
Lesson 99

TIME ZONES

EXTRA PRACTICE WORKSHEET

World Time Zones Map

Hint: Look for the red stars to find the locations named in the questions.



1. Circle the correct word in blue to complete the sentences below:

   Moving to the east / west, each time zone is one hour ahead. Moving to the east / west, each time zone is one hour behind.

2. If it is 10:15 AM in Iceland, what time is it in Angola? _____

3. If it is 9:30 PM on Sunday in Alaska, what time and day is it in Sweden? _____

4. If it is 6:47 PM in China, what time is it in Bolivia? _____

5. How many time zones are there in Mongolia? _____

PLEASE NOTE

Lesson 100 does not have an Extra Practice Worksheet.

Simply Good and Beautiful

MATH 5

EXTRA PRACTICE WORKSHEETS

ANSWERS & SOLUTIONS

The Good and the Beautiful CURRICULUM

TABLE OF CONTENTS

NOTE TO PARENTS

This *Math 5 Extra Practice Worksheets Answers and Solutions* includes detailed solutions for problems from the Extra Practice Worksheets. Final answers are highlighted for easy reference.

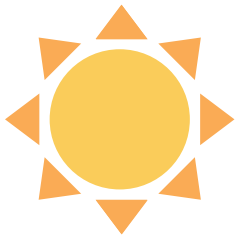
Lesson 1

NUMBER PATTERNS

1. 6, 8, 10, 12, 14, 16, 18

2. The drawings may vary, but the third flower should have six petals and the fourth flower should have seven petals.

3.



4. a. 88 + 11 = 99
99 + 11 = 110
110 + 11 = 121
121 + 11 = 132
132 + 11 = 143
143 + 11 = 154

88, 99, 110, 121, 132, 143, 154

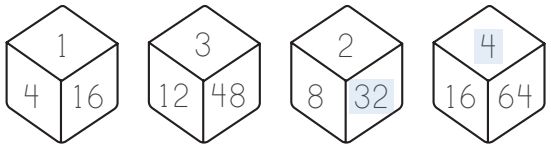
rule: add 11

b. 40 - 4 = 36
36 - 4 = 32
32 - 4 = 28
28 - 4 = 24
24 - 4 = 20
20 - 4 = 16

40, 36, 32, 28, 24, 20, 16

rule: subtract 4

5. first cube: 1 × 4 = 4 4 × 4 = 16
second cube: 3 × 4 = 12 12 × 4 = 48
third cube: 2 × 4 = 8 8 × 4 = 32
fourth cube: 4 × 4 = 16 16 × 4 = 64



6. 15, 17, 19, 21, 23, 25, 27, 29

Lesson 3

DIVISIBILITY STRATEGIES

1. a. To be divisible by 3, the sum of the digits must be divisible by 3.

107:	1 + 0 + 7 = 8	8 is not divisible by 3, so 107 is not divisible by 3.
256:	2 + 5 + 6 = 13	13 is not divisible by 3, so 256 is not divisible by 3.
360:	3 + 6 + 0 = 9	9 is divisible by 3, so 360 is divisible by 3.
1,053:	1 + 0 + 5 + 3 = 9	9 is divisible by 3, so 1,053 is divisible by 3.
2,015:	2 + 0 + 1 + 5 = 8	8 is not divisible by 3, so 2,015 is not divisible by 3.

107 256 (360) (1,053) 2,015

b. To be divisible by 4, the number formed from the last two digits must be divisible by 4.

150: 50 is not divisible by 4, so 150 is not divisible by 4.
112: 12 is divisible by 4, so 112 is divisible by 4.
360: 60 is divisible by 4, so 360 is divisible by 4.
1,064: 64 is divisible by 4, so 1,064 is divisible by 4.
4,128: 28 is divisible by 4, so 4,128 is divisible by 4.

150 ~~112~~ ~~360~~ ~~1,064~~ ~~4,128~~

c. To be divisible by 5, the number must end in 0 or 5.

35: 35 ends in 5, so 35 is divisible by 5.
48: 48 does not end in 0 or 5, so 48 is not divisible by 5.
360: 360 ends in 0, so 360 is divisible by 5.
1,050: 1,050 ends in 0, so 1,050 is divisible by 5.
7,024: 7,024 does not end in 0 or 5, so 7,024 is not divisible by 5.

35 48 360 1,050 7,024

d. To be divisible by 6, the number must be divisible by 2 (even) and by 3 (sum of digits divisible by 3).

58: 58 is even. 5 + 8 = 13, which is not divisible by 3. 58 is not divisible by 6.
72: 72 is even. 7 + 2 = 9, which is divisible by 3. 72 is divisible by 6.
90: 90 is even. 9 + 0 = 9, which is divisible by 3. 90 is divisible by 6.
105: 105 is not even, so divisibility by 3 does not matter. 105 is not divisible by 6.
210: 210 is even. 2 + 1 + 0 = 3, which is divisible by 3. 210 is divisible by 6.

58 [72] [90] 105 [210]

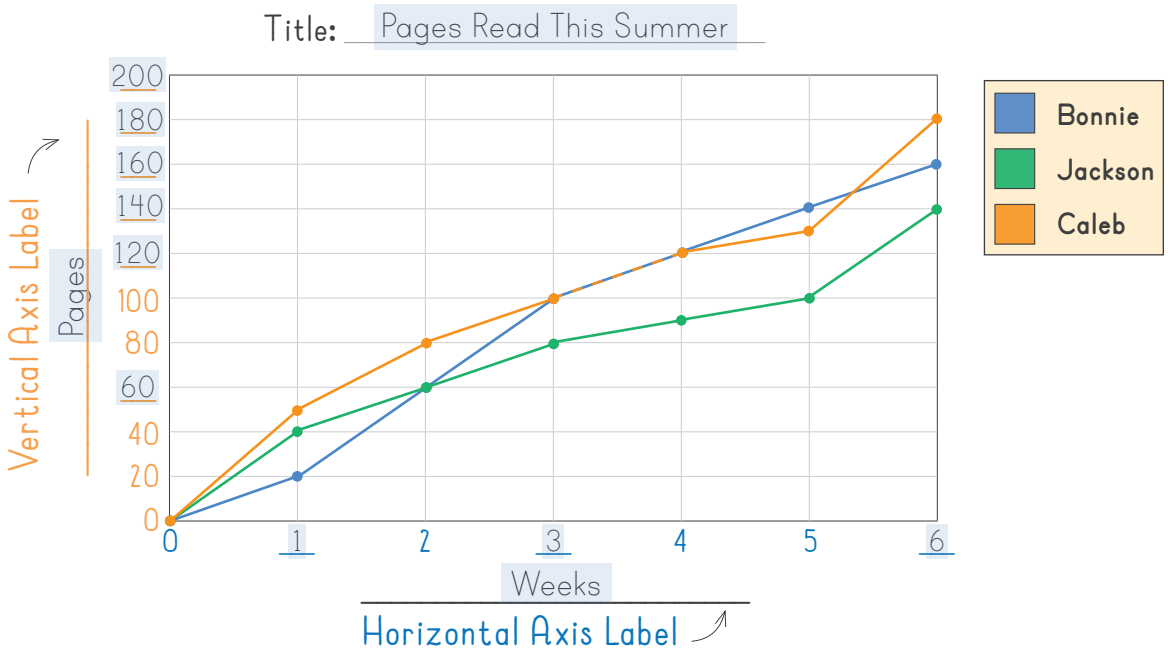
SINGLE, DOUBLE, AND TRIPLE LINE GRAPHS

1. a. centimeters

b. 100 centimeters

c. At 30 days, the height is 100 centimeters. At 120 days, the height is 250 centimeters.
250 - 100 = 150
150 centimeters

2. See the completed graph below for parts a–f. The title and colors may vary.



g. By week 5, Bonnie read 140 pages, Jackson read 100 pages, and Caleb read 130 pages.
Bonnie

h. By week 4, Bonnie read 120 pages, and Jackson read 90 pages.
120 - 90 = 30
30 pages

Lesson 9

FRACTIONS AND PERCENTS

1. a. 8 out of 100 blocks are shaded.

fraction: $\frac{8}{100}$

percent: 8%

b. 36 out of 100 blocks are shaded.

fraction: $\frac{36}{100}$

percent: 36%

c. 38 out of 100 blocks are shaded.

fraction: $\frac{38}{100}$

percent: 38%

2. a. The location may vary, but 50 blocks should be shaded.

percent: 50%

b. The location may vary, but 40 blocks should be shaded.

percent: 40%

c. The location may vary, but 35 blocks should be shaded.

percent: 35%

3.

Cents	Fraction of a Dollar	Percent of a Dollar
18¢	$\frac{18}{100}$	18%
45¢	$\frac{45}{100}$	45%
62¢	$\frac{62}{100}$	62%

Lesson 10

LONG DIVISION WITH REMAINDERS: CHECKING DIVISION

1.

a.
$$\begin{array}{r} 13 \text{ R2} \\ 4\overline{)54} \\ -4\downarrow \\ \hline 14 \\ -12 \\ \hline 2 \end{array}$$

b.
$$\begin{array}{r} 122 \text{ R1} \\ 3\overline{)367} \\ -3\downarrow \\ \hline 06 \\ -6\downarrow \\ \hline 07 \\ -6 \\ \hline 1 \end{array}$$

c.
$$\begin{array}{r} 99 \\ 9\overline{)891} \\ -81\downarrow \\ \hline 81 \\ -81 \\ \hline 0 \end{array}$$

d.
$$\begin{array}{r} 35 \text{ R3} \\ 5\overline{)178} \\ -15\downarrow \\ \hline 28 \\ -25 \\ \hline 3 \end{array}$$

e.
$$\begin{array}{r} 348 \text{ R1} \\ 6\overline{)2{,}089} \\ -18\downarrow \\ \hline 28 \\ -24\downarrow \\ \hline 49 \\ -48 \\ \hline 1 \end{array}$$

f.
$$\begin{array}{r} 92 \text{ R1} \\ 8\overline{)737} \\ -72\downarrow \\ \hline 17 \\ -16 \\ \hline 1 \end{array}$$

2.
$$\begin{array}{r} 915 \text{ R1} \\ 8\overline{)7{,}321} \\ -72\downarrow \\ \hline 12 \\ -8\downarrow \\ \hline 41 \\ -40 \\ \hline 1 \end{array}$$

Check:
$$\begin{array}{r} {\scriptstyle 1\,4} \\ 915 \\ \times\ 8 \\ \hline 7{,}320 \end{array}$$

7,320 + 1 = 7,321

Lesson 34

COMPARING FRACTIONS USING ONE-HALF AND PICTURES

1. a. $\frac{4}{6}$

b. $\frac{5}{8}$

2. $\frac{5}{10}$: Half of 10 is 5.

$\frac{20}{40}$: Half of 40 is 20.

$\frac{3}{7}$: Half of 7 is $3\frac{1}{2}$.

$\frac{36}{72}$: Half of 72 is 36.

$\frac{5}{9}$: Half of 9 is $4\frac{1}{2}$.

$\frac{12}{6}$: Half of 6 is 3.

$\frac{5}{10}$ $\frac{20}{40}$ $\frac{3}{7}$ $\frac{36}{72}$ $\frac{5}{9}$ $\frac{12}{6}$

3. $\frac{1}{4}$: Half of 4 is 2. 1 is less than 2.

$\frac{1}{5}$: Half of 5 is $2\frac{1}{2}$. 1 is less than $2\frac{1}{2}$.

$\frac{7}{16}$: Half of 16 is 8. 7 is less than 8.

$\frac{3}{2}$: Half of 2 is 1. 3 is greater than 1.

$\frac{6}{7}$: Half of 7 is $3\frac{1}{2}$. 6 is greater than $3\frac{1}{2}$.

$\frac{2}{7}$: Half of 7 is $3\frac{1}{2}$. 2 is less than $3\frac{1}{2}$.

~~$\frac{1}{4}$~~ ~~$\frac{1}{5}$~~ ~~$\frac{7}{16}$~~ $\frac{3}{2}$ $\frac{6}{7}$ ~~$\frac{2}{7}$~~

4. $\frac{5}{8}$: Half of 8 is 4. 5 is greater than 4.

$\frac{3}{9}$: Half of 9 is $4\frac{1}{2}$. 3 is less than $4\frac{1}{2}$.

$\frac{15}{32}$: Half of 32 is 16. 15 is less than 16.

$\frac{5}{12}$: Half of 12 is 6. 5 is less than 6.

$\frac{11}{18}$: Half of 18 is 9. 11 is greater than 9.

$\frac{8}{15}$: Half of 15 is $7\frac{1}{2}$. 8 is greater than $7\frac{1}{2}$.

$\boxed{\frac{5}{8}}$ $\frac{3}{9}$ $\frac{15}{32}$ $\frac{5}{12}$ $\boxed{\frac{11}{18}}$ $\boxed{\frac{8}{15}}$

5. a. $\frac{4}{8}$: Half of 8 is 4. $\frac{4}{8} = \frac{1}{2}$

$\frac{3}{4}$: Half of 4 is 2. 3 is greater than 2, so $\frac{3}{4} > \frac{1}{2}$.

$\frac{1}{3}$: Half of 3 is $1\frac{1}{2}$. 1 is less than $1\frac{1}{2}$, so $\frac{1}{3} < \frac{1}{2}$.

Least to greatest: $\frac{1}{3}, \frac{4}{8}, \frac{3}{4}$

b. $\frac{7}{10}$: Half of 10 is 5. 7 is greater than 5, so $\frac{7}{10} > \frac{1}{2}$.

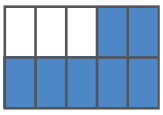
$\frac{3}{8}$: Half of 8 is 4. 3 is less than 4, so $\frac{3}{8} < \frac{1}{2}$.

$\frac{5}{10}$: Half of 10 is 5. $\frac{5}{10} = \frac{1}{2}$

Least to greatest: $\frac{3}{8}, \frac{5}{10}, \frac{7}{10}$

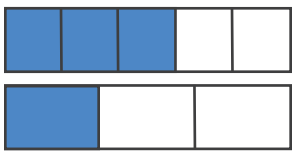
6. Shapes may vary.

a.



b.

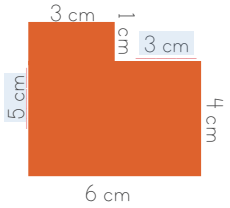
7. $\frac{3}{5} > \frac{1}{3}$



Lesson 37

PERIMETER AND AREA OF IRREGULAR SHAPES

1. a.



Top right: 3 cm + ____ = 6 cm
6 cm − 3 cm = 3 cm

Left side: 4 cm + 1 cm = 5 cm

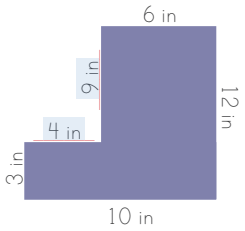
Perimeter:
3 cm + 1 cm + 3 cm + 4 cm + 6 cm + 5 cm = 22 cm

Area 1 (top rectangle): 3 cm × 1 cm = 3 cm^2

Area 2 (bottom rectangle): 4 cm × 6 cm = 24 cm^2

Area: 3 cm^2 + 24 cm^2 = 27 cm^2

b.



Upper left side: 3 in + ____ = 12 in
12 in − 3 in = 9 in

Top left of smaller rectangle: 6 in + ____ = 10 in
10 in − 6 in = 4 in

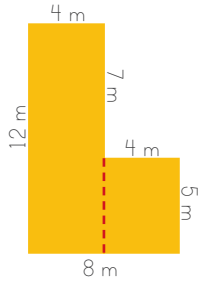
Perimeter:
3 in + 10 in + 12 in + 6 in + 9 in + 4 in = 44 in

Area 1 (top rectangle): 9 in × 6 in = 54 in^2

Area 2 (bottom rectangle): 3 in × 10 in = 30 in^2

Area: 54 in^2 + 30 in^2 = 84 in^2

2. Method 1: Split into two rectangles with a vertical line.

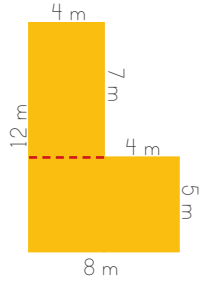


Area of left rectangle: 12 m × 4 m = 48 m^2

Area of right rectangle: 4 m × 5 m = 20 m^2

Area of irregular shape: 48 m^2 + 20 m^2 = 68 m^2

Method 2: Split into two rectangles with a horizontal line.

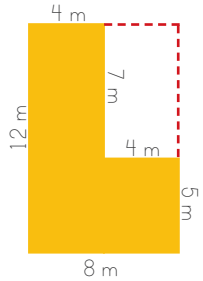


Area of top rectangle: 7 m × 4 m = 28 m^2

Area of bottom rectangle: 8 m × 5 m = 40 m^2

Area of irregular shape: 28 m^2 + 40 m^2 = 68 m^2

Method 3: Create one large rectangle.



Area of large rectangle: 8 m × 12 m = 96 m^2

Area of the empty space: 4 m × 7 m = 28 m^2

Area of irregular shape: 96 m^2 − 28 m^2 = 68 m^2

Lesson 63

USING THE LCM TO FIND COMMON DENOMINATORS

1. a. multiples of 2: 2, 4, 6, 8, 10
multiples of 3: 3, 6, 9, 12, 15
LCM of 2 and 3: 6
equivalent fractions with the LCD:

$\frac{1}{2} = \frac{3}{6}$ $\frac{1}{3} = \frac{2}{6}$

b. multiples of 4: 4, 8, 12, 16, 20
multiples of 5: 5, 10, 15, 20, 25
LCM of 4 and 5: 20
equivalent fractions with the LCD:

$\frac{1}{4} = \frac{5}{20}$ $\frac{2}{5} = \frac{8}{20}$

2. a. multiples of 4: 4, 8, 12, 16, 20
multiples of 2: 2, 4, 6, 8, 10
LCM of 4 and 2: 4

$\frac{1}{4} = \frac{1}{4}$ $\frac{1}{2} = \frac{2}{4}$

$\frac{1}{4} + \frac{1}{2} = \frac{1}{4} + \frac{2}{4} = \frac{3}{4}$

b. multiples of 8: 8, 16, 24, 32, 40
multiples of 4: 4, 8, 12, 16, 20
LCM of 8 and 4: 8

$\frac{7}{8} = \frac{7}{8}$ $\frac{1}{4} = \frac{2}{8}$

$\frac{7}{8} - \frac{1}{4} = \frac{7}{8} - \frac{2}{8} = \frac{5}{8}$

3. a. multiples of 3: 3, 6, 9, 12, 15
multiples of 6: 6, 12, 18, 24, 30
LCM of 3 and 6: 6

$\frac{2}{3} = \frac{4}{6}$ $\frac{1}{6} = \frac{1}{6}$

$3\frac{2}{3} \rightarrow 3\frac{4}{6}$
$+ 1\frac{1}{6} \quad + 1\frac{1}{6}$
$4\frac{5}{6}$

b. multiples of 8: 8, 16, 24, 32, 40
multiples of 4: 4, 8, 12, 16, 20
LCM of 8 and 4: 8

$\frac{3}{8} = \frac{3}{8}$ $\frac{1}{4} = \frac{2}{8}$

$2\frac{3}{8} \rightarrow 2\frac{3}{8}$
$+ 3\frac{1}{4} \quad + 3\frac{2}{8}$
$5\frac{5}{8}$

c. multiples of 6: 6, 12, 18, 24, 30
multiples of 5: 5, 10, 15, 20, 25, 30
LCM of 6 and 5: 30

$\frac{4}{6} = \frac{20}{30}$ $\frac{1}{5} = \frac{6}{30}$

$10\frac{4}{6} \rightarrow 10\frac{20}{30}$
$- 4\frac{1}{5} \quad - 4\frac{6}{30}$
$6\frac{14}{30} = 6\frac{7}{15}$

d. multiples of 7: 7, 14, 21, 28, 35
multiples of 14: 14, 28, 42, 56, 70
LCM of 7 and 14: 14

$\frac{6}{7} = \frac{12}{14}$ $\frac{1}{14} = \frac{1}{14}$

$5\frac{6}{7} \rightarrow 5\frac{12}{14}$
$- 3\frac{1}{14} \quad - 3\frac{1}{14}$
$2\frac{11}{14}$

Lesson 67

ROUNDING FRACTIONS AND MIXED NUMBERS TO THE NEAREST WHOLE NUMBER

1. Work for each problem is shown below.

A	B	C	D	E	F
$\frac{2}{4}$	$\frac{2}{5}$	$\frac{7}{12}$	$\frac{3}{7}$	$\frac{3}{6}$	$\frac{3}{5}$

A Half of 4 is 2.
$\frac{2}{4}$ is equal to $\frac{1}{2}$.

B Half of 5 is $2\frac{1}{2}$. 2 is less than $2\frac{1}{2}$.
$\frac{2}{5}$ is less than $\frac{1}{2}$.

C Half of 12 is 6. 7 is greater than 6.
$\frac{7}{12}$ is greater than $\frac{1}{2}$.

D Half of 7 is $3\frac{1}{2}$. 3 is less than $3\frac{1}{2}$.
$\frac{3}{7}$ is less than $\frac{1}{2}$.

E Half of 6 is 3.
$\frac{3}{6}$ is equal to $\frac{1}{2}$.

F Half of 5 is $2\frac{1}{2}$. 3 is greater than $2\frac{1}{2}$.
$\frac{3}{5}$ is greater than $\frac{1}{2}$.

2. a. Half of 5 is $2\frac{1}{2}$. 4 is greater than $2\frac{1}{2}$.
$\frac{4}{5}$ is greater than $\frac{1}{2}$ ⟶ round up
$\frac{4}{5}$ ⟶ 1

b. Half of 7 is $3\frac{1}{2}$. 3 is less than $3\frac{1}{2}$.
$\frac{3}{7}$ is less than $\frac{1}{2}$ ⟶ round down
$\frac{3}{7}$ ⟶ 0

c. Half of 15 is $7\frac{1}{2}$. 6 is less than $7\frac{1}{2}$.
$\frac{6}{15}$ is less than $\frac{1}{2}$ ⟶ round down
$\frac{6}{15}$ ⟶ 0

d. Half of 20 is 10. 19 is greater than 10.
$\frac{19}{20}$ is greater than $\frac{1}{2}$ ⟶ round up
$\frac{19}{20}$ ⟶ 1

3. a. Half of 5 is $2\frac{1}{2}$. 3 is greater than $2\frac{1}{2}$.
$\frac{3}{5}$ is greater than $\frac{1}{2}$ ⟶ round up
$2\frac{3}{5}$ ⟶ 3

b. Half of 5 is $2\frac{1}{2}$. 1 is less than $2\frac{1}{2}$.
$\frac{1}{5}$ is less than $\frac{1}{2}$ ⟶ round down
$5\frac{1}{5}$ ⟶ 5

c. Half of 11 is $5\frac{1}{2}$. 5 is less than $5\frac{1}{2}$.
$\frac{5}{11}$ is less than $\frac{1}{2}$ ⟶ round down
$6\frac{5}{11}$ ⟶ 6

4. a. $\frac{13}{2} = 6\frac{1}{2}$
$\frac{1}{2}$ ⟶ round up
$6\frac{1}{2}$ ⟶ 7

b. $\frac{57}{6} = 9\frac{3}{6} = 9\frac{1}{2}$
$\frac{1}{2}$ ⟶ round up
$9\frac{1}{2}$ ⟶ 10

c. $\frac{46}{7} = 6\frac{4}{7}$
Half of 7 is $3\frac{1}{2}$. 4 is greater than $3\frac{1}{2}$.
$\frac{4}{7}$ ⟶ round up
$6\frac{4}{7}$ ⟶ 7

d. $\frac{78}{10} = 7\frac{8}{10} = 7\frac{4}{5}$
Half of 5 is $2\frac{1}{2}$. 4 is greater than $2\frac{1}{2}$.
$\frac{4}{5}$ ⟶ round up
$7\frac{4}{5}$ ⟶ 8

Lesson 91

DIVIDING DECIMAL NUMBERS BY WHOLE NUMBERS

1. a. $8\overline{)43.^{3}5^{3}2}$ $\quad 5.44$

b. $9\overline{)24^{6}5.^{2}7}$ $\quad 27.3$

c. $5\overline{)34.^{4}3^{3}5}$ $\quad 6.87$

2. a.
$$\begin{array}{r} 3.48 \\ 7\overline{)24.36} \\ -21 \\ \hline 33 \\ -28 \\ \hline 56 \\ -56 \\ \hline 0 \end{array}$$

3.48

b.
$$\begin{array}{r} 92.41 \\ 6\overline{)554.46} \\ -54 \\ \hline 14 \\ -12 \\ \hline 24 \\ -24 \\ \hline 06 \\ -6 \\ \hline 0 \end{array}$$

92.41

c.
$$\begin{array}{r} 8.27 \\ 8\overline{)66.16} \\ -64 \\ \hline 21 \\ -16 \\ \hline 56 \\ -56 \\ \hline 0 \end{array}$$

8.27

3. $0.244 \div 4$ $\quad$ (244 ÷ 4) $\quad 24.4 \div 4$

$4\overline{)0.244}$ $\quad 0.061$ $\quad$ $4\overline{)244}$ $\quad 61$ $\quad$ $4\overline{)24.4}$ $\quad 6.1$

4. a. $3\overline{)12.7^{1}5}$ $\quad 4.25$ ft

b. $8\overline{)\$12.^{4}80}$ $\quad \$1.60$

c. $7\overline{)\$11^{4}3.^{1}7^{3}5}$ $\quad \$16.25$

Lesson 98

DIVIDING BY DECIMALS

1. a. $0.03\overline{)0.063} \longrightarrow 3\overline{)6.3}$ $\quad 2.1$

b. $0.7\overline{)10.5} \longrightarrow 7\overline{)10^{3}5}$ $\quad 15$

2. a. $0.4\overline{)98.6} \longrightarrow 4\overline{)986.0}$ $\quad 246.5$

-8
18
-16
26
-24
20
-20
0

b. $1.5\overline{)4.815} \longrightarrow 15\overline{)48.15}$ $\quad 3.21$

-45
31
-30
15
-15
0

3. a. $0.6\overline{)3.50} \longrightarrow 6\overline{)35.00}$ $\quad 5.83\ldots = 5.8\overline{3}$

-30
50
-48
20
-18
2

b. $0.8\overline{)4.608} \longrightarrow 8\overline{)46.^{6}0^{4}8}$ $\quad 5.76$

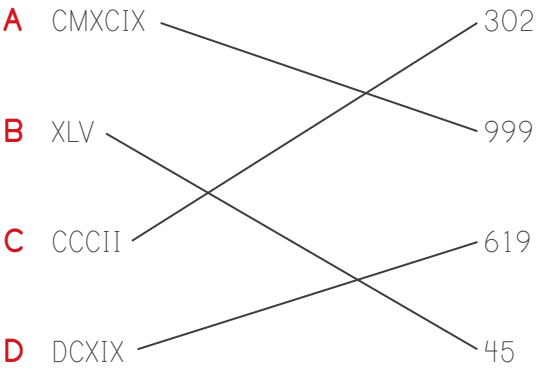
4. $1.2\overline{)51.6} \longrightarrow 12\overline{)51^{3}6}$ $\quad 43$

43 beads

Lesson 117

ROMAN NUMERALS

1. Work for each problem is shown below.



A CMXCIX =
(M − C) + (C − X) + (X − I) =
(1,000 − 100) + (100 − 10) + (10 − 1)
900 + 90 + 9 =
999

B XLV =
(L − X) + V =
(50 − 10) + 5 =
40 + 5 =
45

C CCCII =
C + C + C + I + I =
100 + 100 + 100 + 1 + 1 =
302

D DCXIX =
D + C + X + (X − I) =
500 + 100 + 10 + (10 − 1) =
500 + 100 + 10 + 9 =
619

2. a. 85 =
80 + 5 =
50 + 30 + 5 =
L + XXX + V =
LXXXV

b. 540 =
500 + 40 =
500 + (50 − 10) =
D + XL =
DXL

c. 911 =
900 + 10 + 1 =
(1,000 − 100) + 10 + 1 =
CM + X + I =
CMXI

d. 790 =
700 + 90 =
500 + 200 + (100 − 10) =
D + CC + XC =
DCCXC

3. a. CMXXVI =
CM + XX + VI =
(1,000 − 100) + (10 + 10) + (5 + 1) =
900 + 20 + 6 =
926

b. LXXVII =
L + XX + VII =
50 + (10 + 10) + (5 + 1 + 1) =
50 + 20 + 7 =
77

c. CLX =
C + L + X =
100 + 50 + 10 =
160

d. CDIV =
CD + IV =
(500 − 100) + (5 − 1) =
400 + 4 =
404