



BEST FOR
ALL

We will set all students on a path to success.

Math
Grade 5
Boot Camp
Student Materials
Week 1



Lesson 1

A

Number Correct: _____

Multiply by 10

1.	$12 \times 10 =$	
2.	$14 \times 10 =$	
3.	$15 \times 10 =$	
4.	$17 \times 10 =$	
5.	$81 \times 10 =$	
6.	$10 \times 81 =$	
7.	$21 \times 10 =$	
8.	$22 \times 10 =$	
9.	$23 \times 10 =$	
10.	$29 \times 10 =$	
11.	$92 \times 10 =$	
12.	$10 \times 92 =$	
13.	$18 \times 10 =$	
14.	$19 \times 10 =$	
15.	$20 \times 10 =$	
16.	$30 \times 10 =$	
17.	$40 \times 10 =$	
18.	$80 \times 10 =$	
19.	$10 \times 80 =$	
20.	$10 \times 50 =$	
21.	$10 \times 90 =$	
22.	$10 \times 70 =$	

23.	$34 \times 10 =$	
24.	$134 \times 10 =$	
25.	$234 \times 10 =$	
26.	$334 \times 10 =$	
27.	$834 \times 10 =$	
28.	$10 \times 834 =$	
29.	$45 \times 10 =$	
30.	$145 \times 10 =$	
31.	$245 \times 10 =$	
32.	$345 \times 10 =$	
33.	$945 \times 10 =$	
34.	$56 \times 10 =$	
35.	$456 \times 10 =$	
36.	$556 \times 10 =$	
37.	$950 \times 10 =$	
38.	$10 \times 950 =$	
39.	$16 \times 10 =$	
40.	$10 \times 60 =$	
41.	$493 \times 10 =$	
42.	$10 \times 84 =$	
43.	$96 \times 10 =$	
44.	$10 \times 580 =$	

B

Number Correct: _____

Improvement: _____

Multiply by 10

1.	$13 \times 10 =$	
2.	$14 \times 10 =$	
3.	$15 \times 10 =$	
4.	$19 \times 10 =$	
5.	$91 \times 10 =$	
6.	$10 \times 91 =$	
7.	$31 \times 10 =$	
8.	$32 \times 10 =$	
9.	$33 \times 10 =$	
10.	$38 \times 10 =$	
11.	$83 \times 10 =$	
12.	$10 \times 83 =$	
13.	$28 \times 10 =$	
14.	$29 \times 10 =$	
15.	$30 \times 10 =$	
16.	$40 \times 10 =$	
17.	$50 \times 10 =$	
18.	$90 \times 10 =$	
19.	$10 \times 90 =$	
20.	$10 \times 20 =$	
21.	$10 \times 60 =$	
22.	$10 \times 80 =$	

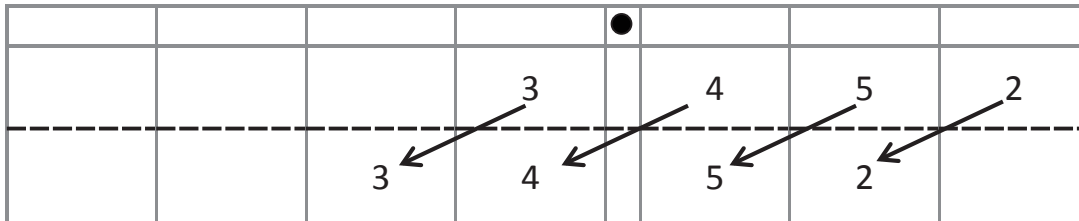
23.	$43 \times 10 =$	
24.	$143 \times 10 =$	
25.	$243 \times 10 =$	
26.	$343 \times 10 =$	
27.	$743 \times 10 =$	
28.	$10 \times 743 =$	
29.	$54 \times 10 =$	
30.	$154 \times 10 =$	
31.	$254 \times 10 =$	
32.	$354 \times 10 =$	
33.	$854 \times 10 =$	
34.	$65 \times 10 =$	
35.	$465 \times 10 =$	
36.	$565 \times 10 =$	
37.	$960 \times 10 =$	
38.	$10 \times 960 =$	
39.	$17 \times 10 =$	
40.	$10 \times 70 =$	
41.	$582 \times 10 =$	
42.	$10 \times 73 =$	
43.	$98 \times 10 =$	
44.	$10 \times 470 =$	

Name _____

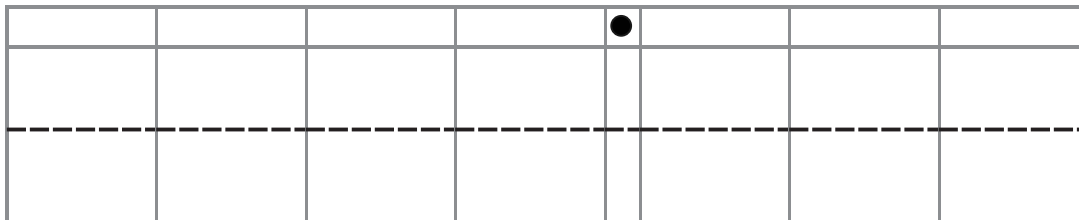
Date _____

1. Use the place value chart and arrows to show how the value of the each digit changes. The first one has been done for you.

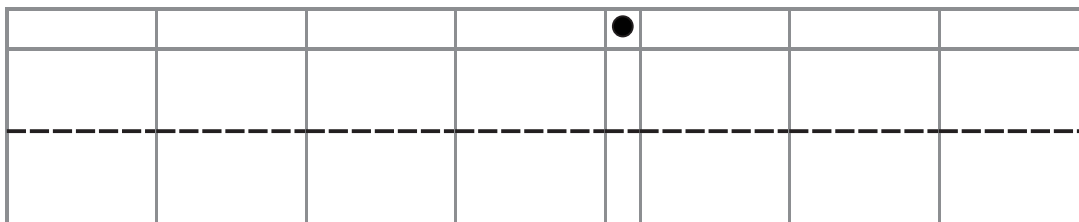
a. $3.452 \times 10 = \underline{34.52}$



b. $3.452 \times 100 = \underline{\hspace{2cm}}$



c. $3.452 \times 1,000 = \underline{\hspace{2cm}}$



d. Explain how and why the value of the 5 changed in (a), (b), and (c).

2. Use the place value chart and arrows to show how the value of each digit changes. The first one has been done for you.

a. $345 \div 10 = \underline{34.5}$

				●			
		3	4	5			
			3	4	5		

b. $345 \div 100 = \underline{\hspace{2cm}}$

				●			

c. $345 \div 1,000 = \underline{\hspace{2cm}}$

				●			

- d. Explain how and why the value of the 4 changed in the quotients in (a), (b), and (c).

3. A manufacturer made 7,234 boxes of coffee stirrers. Each box contains 1,000 stirrers. How many stirrers did they make? Explain your thinking, and include a statement of the solution.
4. A student used his place value chart to show a number. After the teacher instructed him to multiply his number by 10, the chart showed 3,200.4. Draw a picture of what the place value chart looked like at first.

				●			

Explain how you decided what to draw on your place value chart. Be sure to include your reasoning about how the value of each digit was affected by the multiplication. Use words, pictures, or numbers.

5. A microscope has a setting that magnifies an object so that it appears 100 times as large when viewed through the eyepiece. If a tiny insect is 0.095 cm long, how long will the insect appear in centimeters through the microscope? Explain how you know.

Name _____

Date _____

Use the place value chart and arrows to show how the value of each digit changes.

a. $6.671 \times 100 =$ _____

				●			

b. $684 \div 1,000 =$ _____

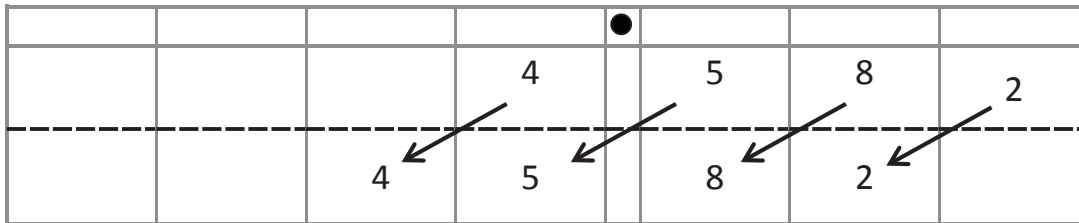
				●			

Name _____

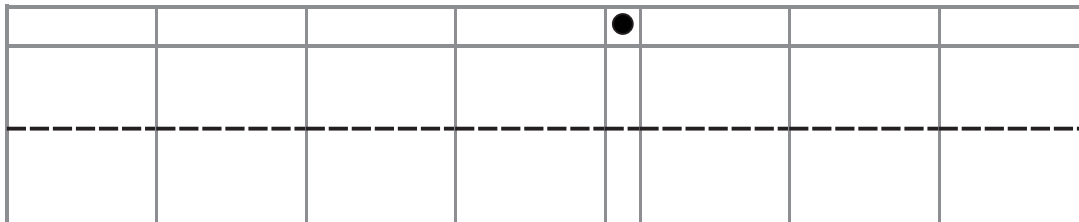
Date _____

1. Use the place value chart and arrows to show how the value of each digit changes. The first one has been done for you.

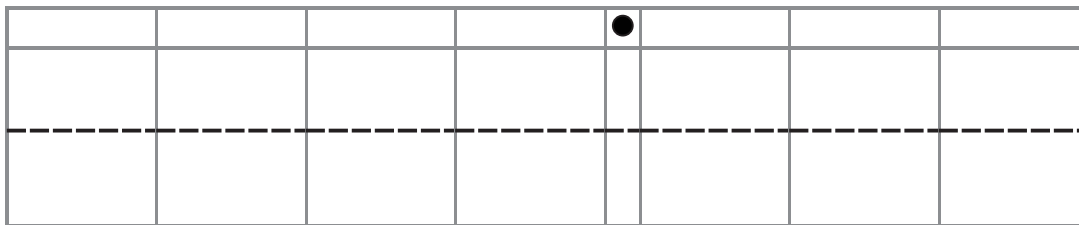
a. $4.582 \times 10 = \underline{45.82}$



b. $7.281 \times 100 = \underline{\hspace{2cm}}$



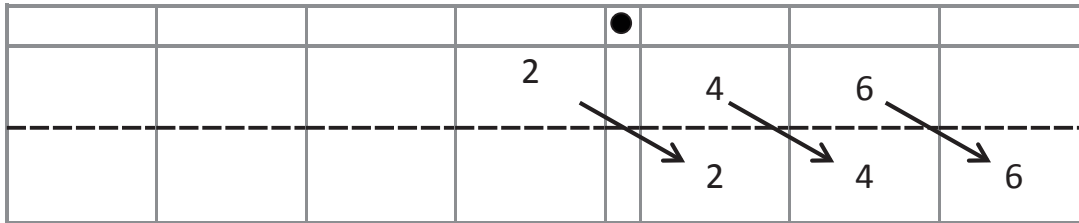
c. $9.254 \times 1,000 = \underline{\hspace{2cm}}$



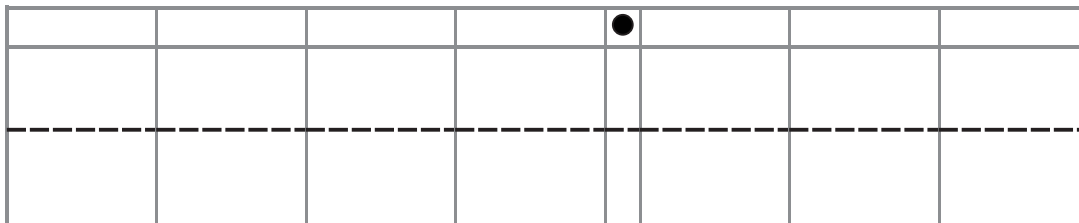
- d. Explain how and why the value of the 2 changed in (a), (b), and (c).

2. Use the place value chart and arrows to show how the value of each digit changes. The first one has been done for you.

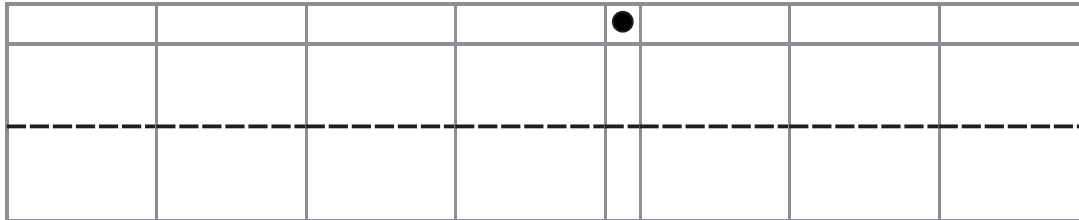
a. $2.46 \div 10 = \underline{\quad 0.246 \quad}$



b. $678 \div 100 = \underline{\hspace{2cm}}$



c. $67 \div 1,000 = \underline{\hspace{2cm}}$



d. Explain how and why the value of the 6 changed in the quotients in (a), (b), and (c).

3. Researchers counted 8,912 monarch butterflies on one branch of a tree at a site in Mexico. They estimated that the total number of butterflies at the site was 1,000 times as large. About how many butterflies were at the site in all? Explain your thinking, and include a statement of the solution.
4. A student used his place value chart to show a number. After the teacher instructed him to divide his number by 100, the chart showed 28.003. Draw a picture of what the place value chart looked like at first.

				●			

Explain how you decided what to draw on your place value chart. Be sure to include reasoning about how the value of each digit was affected by the division.

5. On a map, the perimeter of a park is 0.251 meters. The actual perimeter of the park is 1,000 times as large. What is the actual perimeter of the park? Explain how you know using a place value chart.

•

unlabeled hundreds through hundredths place value chart

1,000,000	100,000	10,000	1,000	100	10	1	.	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			
							.			

millions through thousandths place value chart



Lesson 2

Name _____

Date _____

1. Solve.

a. $54,000 \times 10 =$ _____

e. $0.13 \times 100 =$ _____

b. $54,000 \div 10 =$ _____

f. $13 \div 1,000 =$ _____

c. $8.7 \times 10 =$ _____

g. $3.12 \times 1,000 =$ _____

d. $8.7 \div 10 =$ _____

h. $4,031.2 \div 100 =$ _____

2. Find the products.

a. $19,340 \times 10 =$ _____

b. $19,340 \times 100 =$ _____

c. $19,340 \times 1,000 =$ _____

d. Explain how you decided on the number of zeros in the products for (a), (b), and (c).

3. Find the quotients.

a. $152 \div 10 =$ _____

b. $152 \div 100 =$ _____

c. $152 \div 1,000 =$ _____

d. Explain how you decided where to place the decimal in the quotients for (a), (b), and (c).

4. Janice thinks that 20 hundredths is equivalent to 2 thousandths because 20 hundreds is equal to 2 thousands. Use words and a place value chart to correct Janice's error.

5. Canada has a population that is about $\frac{1}{10}$ as large as the United States. If Canada's population is about 32 million, about how many people live in the United States? Explain the number of zeros in your the answer.

Name _____

Date _____

1. Solve.

a. $32.1 \times 10 =$ _____

b. $3632.1 \div 10 =$ _____

2. Solve.

a. $455 \times 1,000 =$ _____

b. $455 \div 1,000 =$ _____

Name _____

Date _____

1. Solve.

a. $36,000 \times 10 =$ _____

e. $2.4 \times 100 =$ _____

b. $36,000 \div 10 =$ _____

f. $24 \div 1,000 =$ _____

c. $4.3 \times 10 =$ _____

g. $4.54 \times 1,000 =$ _____

d. $4.3 \div 10 =$ _____

h. $3,045.4 \div 100 =$ _____

2. Find the products.

a. $14,560 \times 10 =$ _____

b. $14,560 \times 100 =$ _____

c. $14,560 \times 1,000 =$ _____

Explain how you decided on the number of zeros in the products for (a), (b), and (c).

3. Find the quotients.

a. $16.5 \div 10 =$ _____

b. $16.5 \div 100 =$ _____

c. Explain how you decided where to place the decimal in the quotients for (a) and (b).

4. Ted says that 3 tenths multiplied by 100 equals 300 thousandths. Is he correct? Use a place value chart to explain your answer.

5. Alaska has a land area of about 1,700,000 square kilometers. Florida has a land area $\frac{1}{10}$ the size of Alaska. What is the land area of Florida? Explain how you found your answer.



Lesson 3

A

Number Correct: _____

Multiply by 3

1.	$1 \times 3 =$	
2.	$3 \times 1 =$	
3.	$2 \times 3 =$	
4.	$3 \times 2 =$	
5.	$3 \times 3 =$	
6.	$4 \times 3 =$	
7.	$3 \times 4 =$	
8.	$5 \times 3 =$	
9.	$3 \times 5 =$	
10.	$6 \times 3 =$	
11.	$3 \times 6 =$	
12.	$7 \times 3 =$	
13.	$3 \times 7 =$	
14.	$8 \times 3 =$	
15.	$3 \times 8 =$	
16.	$9 \times 3 =$	
17.	$3 \times 9 =$	
18.	$10 \times 3 =$	
19.	$3 \times 10 =$	
20.	$3 \times 3 =$	
21.	$1 \times 3 =$	
22.	$2 \times 3 =$	

23.	$10 \times 3 =$	
24.	$9 \times 3 =$	
25.	$4 \times 3 =$	
26.	$8 \times 3 =$	
27.	$5 \times 3 =$	
28.	$7 \times 3 =$	
29.	$6 \times 3 =$	
30.	$3 \times 10 =$	
31.	$3 \times 5 =$	
32.	$3 \times 6 =$	
33.	$3 \times 1 =$	
34.	$3 \times 9 =$	
35.	$3 \times 4 =$	
36.	$3 \times 3 =$	
37.	$3 \times 2 =$	
38.	$3 \times 7 =$	
39.	$3 \times 8 =$	
40.	$11 \times 3 =$	
41.	$3 \times 11 =$	
42.	$12 \times 3 =$	
43.	$3 \times 13 =$	
44.	$13 \times 3 =$	

B

Number Correct: _____

Improvement: _____

Multiply by 3

1.	$3 \times 1 =$	
2.	$1 \times 3 =$	
3.	$3 \times 2 =$	
4.	$2 \times 3 =$	
5.	$3 \times 3 =$	
6.	$3 \times 4 =$	
7.	$4 \times 3 =$	
8.	$3 \times 5 =$	
9.	$5 \times 3 =$	
10.	$3 \times 6 =$	
11.	$6 \times 3 =$	
12.	$3 \times 7 =$	
13.	$7 \times 3 =$	
14.	$3 \times 8 =$	
15.	$8 \times 3 =$	
16.	$3 \times 9 =$	
17.	$9 \times 3 =$	
18.	$3 \times 10 =$	
19.	$10 \times 3 =$	
20.	$1 \times 3 =$	
21.	$10 \times 3 =$	
22.	$2 \times 3 =$	

23.	$9 \times 3 =$	
24.	$3 \times 3 =$	
25.	$8 \times 3 =$	
26.	$4 \times 3 =$	
27.	$7 \times 3 =$	
28.	$5 \times 3 =$	
29.	$6 \times 3 =$	
30.	$3 \times 5 =$	
31.	$3 \times 10 =$	
32.	$3 \times 1 =$	
33.	$3 \times 6 =$	
34.	$3 \times 4 =$	
35.	$3 \times 9 =$	
36.	$3 \times 2 =$	
37.	$3 \times 7 =$	
38.	$3 \times 3 =$	
39.	$3 \times 8 =$	
40.	$11 \times 3 =$	
41.	$3 \times 11 =$	
42.	$13 \times 3 =$	
43.	$3 \times 13 =$	
44.	$12 \times 3 =$	

Name _____

Date _____

1. Write the following in exponential form (e.g., $100 = 10^2$).

a. $10,000 =$ _____

d. $100 \times 100 =$ _____

b. $1,000 =$ _____

e. $1,000,000 =$ _____

c. $10 \times 10 =$ _____

f. $1,000 \times 1,000 =$ _____

2. Write the following in standard form (e.g., $5 \times 10^2 = 500$).

a. $9 \times 10^3 =$ _____

e. $4.025 \times 10^3 =$ _____

b. $39 \times 10^4 =$ _____

f. $40.25 \times 10^4 =$ _____

c. $7,200 \div 10^2 =$ _____

g. $72.5 \div 10^2 =$ _____

d. $7,200,000 \div 10^3 =$ _____

h. $7.2 \div 10^2 =$ _____

3. Think about the answers to Problem 2(a–d). Explain the pattern used to find an answer when you multiply or divide a whole number by a power of 10.

4. Think about the answers to Problem 2(e–h). Explain the pattern used to place the decimal in the answer when you multiply or divide a decimal by a power of 10.

5. Complete the patterns.

a. 0.03 0.3 _____ 30 _____ _____

b. 6,500,000 65,000 _____ 6.5 _____

c. _____ 9,430 _____ 94.3 9.43 _____

d. 999 9990 99,900 _____ _____ _____

e. _____ 7.5 750 75,000 _____ _____

f. Explain how you found the unknown numbers in set (b). Be sure to include your reasoning about the number of zeros in your numbers and how you placed the decimal.

g. Explain how you found the unknown numbers in set (d). Be sure to include your reasoning about the number of zeros in your numbers and how you placed the decimal.

6. Shaunnie and Marlon missed the lesson on exponents. Shaunnie incorrectly wrote $10^5 = 50$ on her paper, and Marlon incorrectly wrote $2.5 \times 10^2 = 2.500$ on his paper.

a. What mistake has Shaunnie made? Explain using words, numbers, or pictures why her thinking is incorrect and what she needs to do to correct her answer.

b. What mistake has Marlon made? Explain using words, numbers, or pictures why his thinking is incorrect and what he needs to do to correct his answer.

Name _____

Date _____

1. Write the following in exponential form and as a multiplication sentence using only 10 as a factor (e.g., $100 = 10^2 = 10 \times 10$).

a. $1,000 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

b. $100 \times 100 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2. Write the following in standard form (e.g., $4 \times 10^2 = 400$).

a. $3 \times 10^2 = \underline{\hspace{2cm}}$

c. $800 \div 10^3 = \underline{\hspace{2cm}}$

b. $2.16 \times 10^4 = \underline{\hspace{2cm}}$

d. $754.2 \div 10^2 = \underline{\hspace{2cm}}$

Name _____

Date _____

1. Write the following in exponential form (e.g., $100 = 10^2$).

a. $1000 =$ _____

d. $100 \times 10 =$ _____

b. $10 \times 10 =$ _____

e. $1,000,000 =$ _____

c. $100,000 =$ _____

f. $10,000 \times 10 =$ _____

2. Write the following in standard form (e.g., $4 \times 10^2 = 400$).

a. $4 \times 10^3 =$ _____

e. $6.072 \times 10^3 =$ _____

b. $64 \times 10^4 =$ _____

f. $60.72 \times 10^4 =$ _____

c. $5,300 \div 10^2 =$ _____

g. $948 \div 10^3 =$ _____

d. $5,300,000 \div 10^3 =$ _____

h. $9.4 \div 10^2 =$ _____

3. Complete the patterns.

a. 0.02 0.2 _____ 20 _____ _____

b. 3,400,000 34,000 _____ 3.4 _____

c. _____ 8,570 _____ 85.7 8.57 _____

d. 444 4440 44,400 _____ _____ _____

e. _____ 9.5 950 95,000 _____ _____

4. After a lesson on exponents, Tia went home and said to her mom, “I learned that 10^4 is the same as 40,000.” She has made a mistake in her thinking. Use words, numbers, or a place value chart to help Tia correct her mistake.
5. Solve $247 \div 10^2$ and 247×10^2 .
- a. What is different about the two answers? Use words, numbers, or pictures to explain how the digits shift.
- b. Based on the answers from the pair of expressions above, solve $247 \div 10^3$ and 247×10^3 .

10	$10 \times \underline{\quad}$	

powers of 10 chart



Lesson 4

Name _____

Date _____

1. Convert and write an equation with an exponent. Use your meter strip when it helps you.

a. 3 meters to centimeters $3 \text{ m} = 300 \text{ cm}$ $3 \times 10^2 = 300$

b. 105 centimeters to meters $105 \text{ cm} = \underline{\hspace{1cm}} \text{ m}$ _____

c. 1.68 meters to centimeters $\underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ cm}$ _____

d. 80 centimeters to meters $\underline{\hspace{1cm}} \text{ cm} = \underline{\hspace{1cm}} \text{ m}$ _____

e. 9.2 meters to centimeters $\underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ cm}$ _____

f. 4 centimeters to meters $\underline{\hspace{1cm}} \text{ cm} = \underline{\hspace{1cm}} \text{ m}$ _____

g. In the space below, list the letters of the problems where larger units are converted to smaller units.

2. Convert using an equation with an exponent. Use your meter strip when it helps you.

a. 3 meters to millimeters $\underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ mm}$ _____

b. 1.2 meters to millimeters $\underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ mm}$ _____

c. 1,020 millimeters to meters $\underline{\hspace{1cm}} \text{ mm} = \underline{\hspace{1cm}} \text{ m}$ _____

d. 97 millimeters to meters $\underline{\hspace{1cm}} \text{ mm} = \underline{\hspace{1cm}} \text{ m}$ _____

e. 7.28 meters to millimeters $\underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ mm}$ _____

f. 4 millimeters to meters $\underline{\hspace{1cm}} \text{ mm} = \underline{\hspace{1cm}} \text{ m}$ _____

g. In the space below, list the letters of the problems where smaller units are converted to larger units.

3. Read each aloud as you write the equivalent measures. Write an equation with an exponent you might use to convert.

a. $3.512 \text{ m} =$ _____ mm $3.512 \times 10^3 = 3,512$

b. $8 \text{ cm} =$ _____ m _____

c. $42 \text{ mm} =$ _____ m _____

d. $0.05 \text{ m} =$ _____ mm _____

e. $0.002 \text{ m} =$ _____ cm _____

4. The length of the bar for a high jump competition must always be 4.75 m. Express this measurement in millimeters. Explain your thinking. Include an equation with an exponent in your explanation.

5. A honey bee's length measures 1 cm. Express this measurement in meters. Explain your thinking. Include an equation with an exponent in your explanation.

6. Explain why converting from meters to centimeters uses a different exponent than converting from meters to millimeters.

Name _____

Date _____

1. Convert using an equation with an exponent.

a. 2 meters to centimeters $2 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$ _____

b. 40 millimeters to meters $40 \text{ mm} = \underline{\hspace{2cm}} \text{ m}$ _____

2. Read each aloud as you write the equivalent measures.

a. A piece of fabric measures 3.9 meters. Express this length in centimeters.

b. Ms. Ramos's thumb measures 4 centimeters. Express this length in meters.

Name _____

Date _____

1. Convert and write an equation with an exponent. Use your meter strip when it helps you.

a. 2 meters to centimeters $2\text{m} = 200\text{ cm}$ $2 \times 10^2 = 200$

b. 108 centimeters to meters $108\text{ cm} = \underline{\hspace{1cm}}\text{ m}$ _____

c. 2.49 meters to centimeters $\underline{\hspace{1cm}}\text{ m} = \underline{\hspace{1cm}}\text{ cm}$ _____

d. 50 centimeters to meters $\underline{\hspace{1cm}}\text{ cm} = \underline{\hspace{1cm}}\text{ m}$ _____

e. 6.3 meters to centimeters $\underline{\hspace{1cm}}\text{ m} = \underline{\hspace{1cm}}\text{ cm}$ _____

f. 7 centimeters to meters $\underline{\hspace{1cm}}\text{ cm} = \underline{\hspace{1cm}}\text{ m}$ _____

g. In the space below, list the letters of the problems where smaller units are converted to larger units.

2. Convert using an equation with an exponent. Use your meter strip when it helps you.

a. 4 meters to millimeters $\underline{\hspace{1cm}}\text{ m} = \underline{\hspace{1cm}}\text{ mm}$ _____

b. 1.7 meters to millimeters $\underline{\hspace{1cm}}\text{ m} = \underline{\hspace{1cm}}\text{ mm}$ _____

c. 1,050 millimeters to meters $\underline{\hspace{1cm}}\text{ mm} = \underline{\hspace{1cm}}\text{ m}$ _____

d. 65 millimeters to meters $\underline{\hspace{1cm}}\text{ mm} = \underline{\hspace{1cm}}\text{ m}$ _____

e. 4.92 meters to millimeters $\underline{\hspace{1cm}}\text{ m} = \underline{\hspace{1cm}}\text{ mm}$ _____

f. 3 millimeters to meters $\underline{\hspace{1cm}}\text{ mm} = \underline{\hspace{1cm}}\text{ m}$ _____

g. In the space below, list the letters of the problems where larger units are converted to smaller units.

3. Read each aloud as you write the equivalent measures. Write an equation with an exponent you might use to convert.

a. 2.638 m = _____ mm $2.638 \times 10^3 = 2,638$

b. 7 cm = _____ m _____

c. 39 mm = _____ m _____

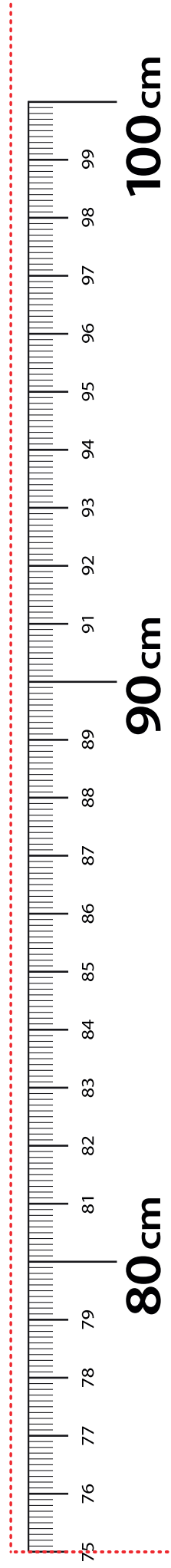
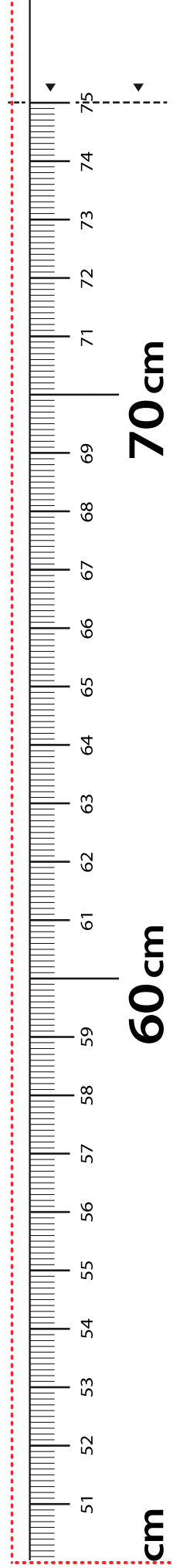
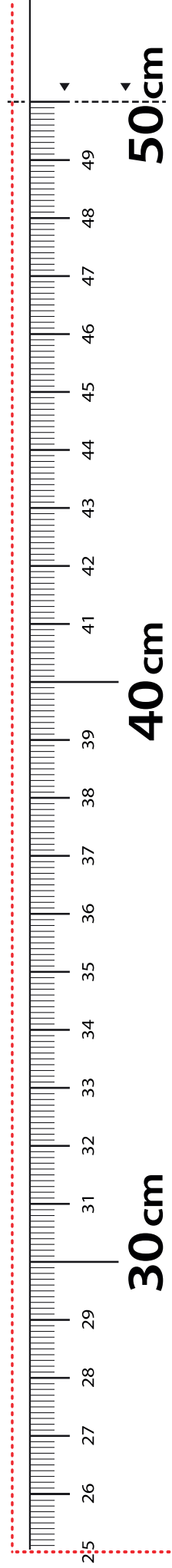
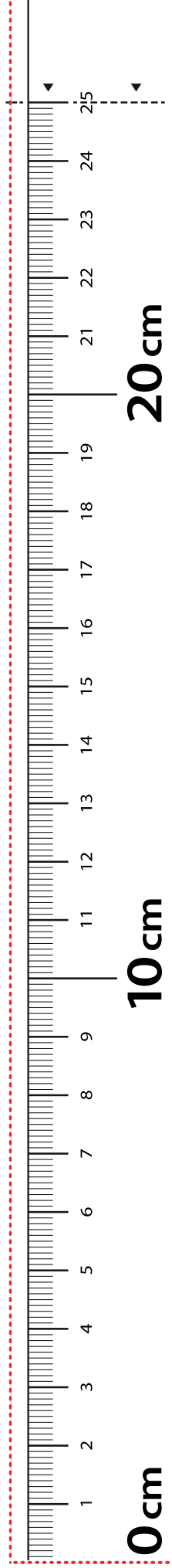
d. 0.08 m = _____ mm _____

e. 0.005 m = _____ cm _____

4. Yi Ting's height is 1.49 m. Express this measurement in millimeters. Explain your thinking. Include an equation with an exponent in your explanation.

5. A ladybug's length measures 2 cm. Express this measurement in meters. Explain your thinking. Include an equation with an exponent in your explanation.

6. The length of a sticky note measures 77 millimeters. Express this length in meters. Explain your thinking. Include an equation with an exponent in your explanation.



LEGEND CUT ---- ALIGN EDGE



Lesson 5

A

Number Correct: _____

Multiply Decimals by 10, 100, and 1,000

1.	$62.3 \times 10 =$	
2.	$62.3 \times 100 =$	
3.	$62.3 \times 1,000 =$	
4.	$73.6 \times 10 =$	
5.	$73.6 \times 100 =$	
6.	$73.6 \times 1,000 =$	
7.	$0.6 \times 10 =$	
8.	$0.06 \times 10 =$	
9.	$0.006 \times 10 =$	
10.	$0.3 \times 10 =$	
11.	$0.3 \times 100 =$	
12.	$0.3 \times 1,000 =$	
13.	$0.02 \times 10 =$	
14.	$0.02 \times 100 =$	
15.	$0.02 \times 1,000 =$	
16.	$0.008 \times 10 =$	
17.	$0.008 \times 100 =$	
18.	$0.008 \times 1,000 =$	
19.	$0.32 \times 10 =$	
20.	$0.67 \times 10 =$	
21.	$0.91 \times 100 =$	
22.	$0.74 \times 100 =$	

23.	$4.1 \times 1,000 =$	
24.	$7.6 \times 1,000 =$	
25.	$0.01 \times 1,000 =$	
26.	$0.07 \times 1,000 =$	
27.	$0.072 \times 100 =$	
28.	$0.802 \times 10 =$	
29.	$0.019 \times 1,000 =$	
30.	$7.412 \times 1,000 =$	
31.	$6.8 \times 100 =$	
32.	$4.901 \times 10 =$	
33.	$16.07 \times 100 =$	
34.	$9.19 \times 10 =$	
35.	$18.2 \times 100 =$	
36.	$14.7 \times 1,000 =$	
37.	$2.021 \times 100 =$	
38.	$172.1 \times 10 =$	
39.	$3.2 \times 20 =$	
40.	$4.1 \times 20 =$	
41.	$3.2 \times 30 =$	
42.	$1.3 \times 30 =$	
43.	$3.12 \times 40 =$	
44.	$14.12 \times 40 =$	

B

Number Correct: _____

Improvement: _____

Multiply Decimals by 10, 100, and 1,000

1.	$46.1 \times 10 =$	
2.	$46.1 \times 100 =$	
3.	$46.1 \times 1,000 =$	
4.	$89.2 \times 10 =$	
5.	$89.2 \times 100 =$	
6.	$89.2 \times 1,000 =$	
7.	$0.3 \times 10 =$	
8.	$0.03 \times 10 =$	
9.	$0.003 \times 10 =$	
10.	$0.9 \times 10 =$	
11.	$0.9 \times 100 =$	
12.	$0.9 \times 1,000 =$	
13.	$0.04 \times 10 =$	
14.	$0.04 \times 100 =$	
15.	$0.04 \times 1,000 =$	
16.	$0.007 \times 10 =$	
17.	$0.007 \times 100 =$	
18.	$0.007 \times 1,000 =$	
19.	$0.45 \times 10 =$	
20.	$0.78 \times 10 =$	
21.	$0.28 \times 100 =$	
22.	$0.19 \times 100 =$	

23.	$5.2 \times 1,000 =$	
24.	$8.7 \times 1,000 =$	
25.	$0.01 \times 1,000 =$	
26.	$0.08 \times 1,000 =$	
27.	$0.083 \times 10 =$	
28.	$0.903 \times 10 =$	
29.	$0.017 \times 1,000 =$	
30.	$8.523 \times 1,000 =$	
31.	$7.9 \times 100 =$	
32.	$5.802 \times 10 =$	
33.	$27.08 \times 100 =$	
34.	$8.18 \times 10 =$	
35.	$29.3 \times 100 =$	
36.	$25.8 \times 1,000 =$	
37.	$3.032 \times 100 =$	
38.	$283.1 \times 10 =$	
39.	$2.1 \times 20 =$	
40.	$3.3 \times 20 =$	
41.	$3.1 \times 30 =$	
42.	$1.2 \times 30 =$	
43.	$2.11 \times 40 =$	
44.	$13.11 \times 40 =$	

Name _____

Date _____

1. Express as decimal numerals. The first one is done for you.

a. Four thousandths	0.004
b. Twenty-four thousandths	
c. One and three hundred twenty-four thousandths	
d. Six hundred eight thousandths	
e. Six hundred and eight thousandths	
f. $\frac{46}{1000}$	
g. $3\frac{946}{1000}$	
h. $200\frac{904}{1000}$	

2. Express each of the following values in words.

a. 0.005 _____

b. 11.037 _____

c. 403.608 _____

3. Write the number on a place value chart. Then, write it in expanded form using fractions or decimals to express the decimal place value units. The first one is done for you.

a. 35.827

Tens	Ones		Tenths	Hundredths	Thousandths
3	5	●	8	2	7

$$35.827 = 3 \times 10 + 5 \times 1 + 8 \times \left(\frac{1}{10}\right) + 2 \times \left(\frac{1}{100}\right) + 7 \times \left(\frac{1}{1000}\right) \text{ or}$$

$$= 3 \times 10 + 5 \times 1 + 8 \times 0.1 + 2 \times 0.01 + 7 \times 0.001$$

b. 0.249

c. 57.281

4. Write a decimal for each of the following. Use a place value chart to help, if necessary.

a. $7 \times 10 + 4 \times 1 + 6 \times \left(\frac{1}{10}\right) + 9 \times \left(\frac{1}{100}\right) + 2 \times \left(\frac{1}{1000}\right)$

b. $5 \times 100 + 3 \times 10 + 8 \times 0.1 + 9 \times 0.001$

c. $4 \times 1,000 + 2 \times 100 + 7 \times 1 + 3 \times \left(\frac{1}{100}\right) + 4 \times \left(\frac{1}{1000}\right)$

5. Mr. Pham wrote 2.619 on the board. Christy says it is two and six hundred nineteen thousandths. Amy says it is 2 ones 6 tenths 1 hundredth 9 thousandths. Who is right? Use words and numbers to explain your answer.

Name _____

Date _____

1. Express nine thousandths as a decimal.

2. Express twenty-nine thousandths as a fraction.

3. Express 24.357 in words.
 - a. Write the expanded form using fractions or decimals.

 - b. Express in unit form.

Name _____

Date _____

1. Express as decimal numerals. The first one is done for you.

a. Five thousandths	0.005
b. Thirty-five thousandths	
c. Nine and two hundred thirty-five thousandths	
d. Eight hundred and five thousandths	
e. $\frac{8}{1000}$	
f. $\frac{28}{1000}$	
g. $7\frac{528}{1000}$	
h. $300\frac{502}{1000}$	

2. Express each of the following values in words.

- a. 0.008 _____
- b. 15.062 _____
- c. 607.409 _____

3. Write the number on a place value chart. Then, write it in expanded form using fractions or decimals to express the decimal place value units. The first one is done for you.

- a. 27.346

Tens	Ones		Tenths	Hundredths	Thousandths
2	7	●	3	4	6

$$27.346 = 2 \times 10 + 7 \times 1 + 3 \times \left(\frac{1}{10}\right) + 4 \times \left(\frac{1}{100}\right) + 6 \times \left(\frac{1}{1000}\right) \text{ or}$$

$$27.346 = 2 \times 10 + 7 \times 1 + 3 \times 0.1 + 4 \times 0.01 + 6 \times 0.001$$

b. 0.362

c. 49.564

4. Write a decimal for each of the following. Use a place value chart to help, if necessary.

a. $3 \times 10 + 5 \times 1 + 2 \times \left(\frac{1}{10}\right) + 7 \times \left(\frac{1}{100}\right) + 6 \times \left(\frac{1}{1000}\right)$

b. $9 \times 100 + 2 \times 10 + 3 \times 0.1 + 7 \times 0.001$

c. $5 \times 1000 + 4 \times 100 + 8 \times 1 + 6 \times \left(\frac{1}{100}\right) + 5 \times \left(\frac{1}{1000}\right)$

5. At the beginning of a lesson, a piece of chalk is 4.875 inches long. At the end of the lesson, it is 3.125 inches long. Write the two amounts in expanded form using fractions.

a. At the beginning of the lesson:

b. At the end of the lesson:

6. Mrs. Herman asked the class to write an expanded form for 412.638. Nancy wrote the expanded form using fractions, and Charles wrote the expanded form using decimals. Write their responses.

Thousands	
Hundreds	
Tens	
Ones	
Tenths	
Hundredths	
Thousandths	

thousands through thousandths place value chart