

Name \_\_\_\_\_

Date \_\_\_\_\_

## 2-24 Expressing Decimals as Fractions

Match the decimal with its equivalent fraction. Write the letter of the fraction on the space before its equivalent decimal. After matching, write the letters in order, starting from the top, to complete the statement below.

1.  $\frac{63}{100}$  C 0.63

R.  $\frac{11}{20}$

10. \_\_\_\_\_ 0.875

L.  $5\frac{9}{20}$

2. \_\_\_\_\_ 1.3

I.  $\frac{3}{4}$

11. \_\_\_\_\_ 1.03

E.  $\frac{7}{8}$

3. \_\_\_\_\_ 0.55

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

12. \_\_\_\_\_ 0.57

U.  $\frac{1}{25}$

4. \_\_\_\_\_ 0.75

P.  $5\frac{16}{25}$

13. \_\_\_\_\_ 5.45

C.  $\frac{57}{100}$

5. \_\_\_\_\_ 0.005

H.  $1\frac{3}{10}$

14. \_\_\_\_\_ 5.4

S.  $\frac{3}{25}$

6. \_\_\_\_\_ 0.60

S.  $\frac{1}{200}$

15. \_\_\_\_\_ 0.087

I.  $\frac{1}{5}$

7. \_\_\_\_\_ 0.225

O.  $\frac{9}{40}$

16. \_\_\_\_\_ 0.2

R.  $1\frac{3}{100}$

8. \_\_\_\_\_ 5.64

C.  $\frac{63}{100}$

17. \_\_\_\_\_ 0.04

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

9. \_\_\_\_\_ 0.500

T.  $\frac{3}{5}$

18. \_\_\_\_\_ 0.120

V.  $\frac{87}{1000}$

In 1593, \_\_\_\_\_

\_\_\_\_\_, a German mathematician, was the first European to use a decimal point for decimal fractions.

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Example  $\frac{2}{3} \div \frac{3}{4} = \frac{2}{3} \times \frac{4}{3} = \frac{8}{9}$

## 2-14 Dividing Simple Fractions

Divide the fractions and be sure to simplify all answers. Write the letter of the problem above its answer to complete the statement below.

P.  $\frac{3}{5} \times \frac{6}{7} = \frac{18}{35}$   
 ~~$\frac{3}{5} \times \frac{6}{7} = \frac{18}{35}$~~

L.  $\frac{2}{3} \div \frac{3}{4} =$  \_\_\_\_\_

O.  $\frac{1}{2} \div \frac{3}{8} =$  \_\_\_\_\_

E.  $\frac{7}{8} \div \frac{14}{24} =$  \_\_\_\_\_

T.  $\frac{6}{11} \div \frac{3}{22} =$  \_\_\_\_\_

R.  $\frac{4}{5} \div \frac{4}{9} =$  \_\_\_\_\_

C.  $\frac{2}{5} \div \frac{13}{15} =$  \_\_\_\_\_

D.  $\frac{9}{10} \div \frac{4}{5} =$  \_\_\_\_\_

O.  $\frac{1}{7} \div 7 =$  \_\_\_\_\_

H.  $\frac{7}{8} \div \frac{5}{9} =$  \_\_\_\_\_

S.  $\frac{7}{15} \div \frac{5}{24} =$  \_\_\_\_\_

F.  $\frac{8}{9} \div \frac{4}{7} =$  \_\_\_\_\_

I.  $\frac{3}{16} \div \frac{6}{7} =$  \_\_\_\_\_

V.  $\frac{14}{15} \div \frac{7}{12} =$  \_\_\_\_\_

A.  $\frac{11}{16} \div \frac{22}{27} =$  \_\_\_\_\_

R.  $\frac{7}{10} \div \frac{21}{25} =$  \_\_\_\_\_

O.  $\frac{3}{8} \div 9 =$  \_\_\_\_\_

I.  $\frac{12}{25} \div \frac{3}{20} =$  \_\_\_\_\_

E.  $\frac{7}{18} \div \frac{14}{15} =$  \_\_\_\_\_

R.  $\frac{8}{15} \div \frac{6}{35} =$  \_\_\_\_\_

C.  $6 \div \frac{10}{13} =$  \_\_\_\_\_

I.  $\frac{3}{20} \div \frac{18}{45} =$  \_\_\_\_\_

To divide fractions, you must multiply by the

P

$\frac{5}{6}$	$\frac{5}{12}$	$\frac{6}{13}$	$3\frac{1}{5}$	$\frac{7}{10}$	$3\frac{1}{9}$	$1\frac{1}{3}$	$7\frac{4}{5}$	$\frac{27}{32}$	$\frac{8}{9}$
		$\frac{1}{24}$	$1\frac{5}{9}$		4	$1\frac{23}{40}$	$1\frac{1}{2}$		
$1\frac{1}{8}$	$\frac{7}{32}$	$1\frac{3}{5}$	$\frac{3}{8}$	$2\frac{6}{25}$	$\frac{1}{49}$	$1\frac{4}{5}$			

## 2-28 Multiplying Decimals

Multiply the decimals. If your answer extends beyond the thousandths place, round your answer to the nearest thousandth. Write the letter of the problem above its answer to complete the message below.

C. 
$$\begin{array}{r} 2.3 \\ \times 7.1 \\ \hline \end{array}$$

P. 
$$\begin{array}{r} 0.42 \\ \times 0.57 \\ \hline \end{array}$$

O. 
$$\begin{array}{r} 0.62 \\ \times 7.7 \\ \hline \end{array}$$

T. 
$$\begin{array}{r} 96 \\ \times 3.4 \\ \hline \end{array}$$

L. 
$$\begin{array}{r} 0.871 \\ \times 3.9 \\ \hline \end{array}$$

N. 
$$\begin{array}{r} 5.12 \\ \times 8.7 \\ \hline \end{array}$$

D. 
$$\begin{array}{r} 63.8 \\ \times 7.5 \\ \hline \end{array}$$

E. 
$$\begin{array}{r} 5.47 \\ \times 0.83 \\ \hline \end{array}$$

L. 
$$\begin{array}{r} 0.926 \\ \times 0.38 \\ \hline \end{array}$$

C. 
$$\begin{array}{r} 70.2 \\ \times 0.86 \\ \hline \end{array}$$

H. 
$$\begin{array}{r} 6.25 \\ \times 6.9 \\ \hline \end{array}$$

E. 
$$\begin{array}{r} 2.39 \\ \times 0.71 \\ \hline \end{array}$$

R. 
$$\begin{array}{r} 14.6 \\ \times 9.3 \\ \hline \end{array}$$

T. 
$$\begin{array}{r} 0.806 \\ \times 0.045 \\ \hline \end{array}$$

Y. 
$$\begin{array}{r} 6.47 \\ \times 39 \\ \hline \end{array}$$

M. 
$$\begin{array}{r} 0.984 \\ \times 0.067 \\ \hline \end{array}$$

E.  $8.046 \times 0.082 =$  \_\_\_\_\_

A.  $4.753 \times 0.076 =$  \_\_\_\_\_

I.  $0.9204 \times 0.063 =$  \_\_\_\_\_

O.  $47.34 \times 0.207 =$  \_\_\_\_\_

C.  $8.029 \times 0.0063 =$  \_\_\_\_\_

T.  $0.06041 \times 0.073 =$  \_\_\_\_\_

I.  $5.407 \times 0.368 =$  \_\_\_\_\_

R.  $0.462 \times 0.806 =$  \_\_\_\_\_

When multiplying decimals, you must position  $\frac{\quad}{326.4}$   $\frac{\quad}{43.125}$   $\frac{\quad}{0.660}$

$$\frac{478.5}{\quad} \quad \frac{1.697}{\quad} \quad \frac{16.33}{\quad} \quad \frac{1.990}{\quad} \quad \frac{0.066}{\quad} \quad \frac{0.361}{\quad} \quad \frac{3.397}{\quad}$$

$$\frac{0.239}{\quad} \quad \frac{4.774}{\quad} \quad \frac{0.058}{\quad} \quad \frac{44.544}{\quad} \quad \frac{0.036}{\quad}$$

$$\frac{60.372}{\quad} \quad \frac{9.799}{\quad} \quad \frac{135.78}{\quad} \quad \frac{0.372}{\quad} \quad \frac{4.540}{\quad} \quad \frac{0.051}{\quad} \quad \frac{0.004}{\quad} \quad \frac{0.352}{\quad} \quad \frac{252.33}{\quad}$$

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# 2-29 Dividing Decimals by Whole Numbers and Decimals

Divide the decimals. Write the letter of the problem above its answer to complete the statement below. If necessary, round your answer to the hundredths place.

T.  $9 \overline{)2.79}$

K.  $6 \overline{)84.12}$

H.  $0.5 \overline{)2.560}$

I.  $0.9 \overline{).8106}$

O.  $0.7 \overline{)64.38}$

N.  $54 \overline{)38.88}$

R.  $64 \overline{)1.344}$

F.  $0.04 \overline{)5.792}$

A.  $0.07 \overline{)1.652}$

B.  $0.04 \overline{)0.0132}$

O.  $2.3 \overline{)12.88}$

M.  $7.2 \overline{)36.648}$

N.  $0.50 \overline{)22}$

E.  $0.44 \overline{)8.80}$

T.  $0.16 \overline{)8}$

A.  $0.25 \overline{)0.300}$

M.  $0.84 \overline{)5.46}$

E.  $0.67 \overline{)1.49}$

O.  $7.3 \overline{)48.20}$

E.  $0.49 \overline{)2.3}$

W.  $0.56 \overline{)3.89}$

U.  $0.28 \overline{)6.64}$

E.  $0.94 \overline{)600}$

$6.382 \approx 6.38$

$$\begin{array}{r} 94 \overline{)600.00} \\ -564 \\ \hline 360 \\ -352 \\ \hline 80 \\ -752 \\ \hline 280 \\ -280 \\ \hline 0 \end{array}$$

L.  $0.073 \overline{)67.1}$

T.  $0.087 \overline{)48.3}$

When dividing by decimals, you must multiply the divisor by a power \_\_\_\_\_

5.6 144.8

**E**

$0.31 \overline{)6.38}$

$44 \overline{)50}$

$91.97 \overline{)50}$

$555.17 \overline{)0.90}$

$6.95 \overline{)1.2}$

$23.71 \overline{)0.72}$

$5.09 \overline{)0.33}$

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## 5-14 Matching and Evaluating Expressions

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Match each phrase with its algebraic expression in the box. Record the letter of the expression in the blank before the phrase. Next, write the letters in order, starting with the first problem, to complete the statement at the end of the activity. Follow the directions revealed in the statement and write your answer in the blank at the end of each phrase. **Hint:**  $n$  represents "number."

1. \_\_\_\_\_ 2 less than a number \_\_\_\_\_
2. \_\_\_\_\_ a number squared \_\_\_\_\_
3. \_\_\_\_\_ the absolute value of twice a number \_\_\_\_\_
4. \_\_\_\_\_ the average of 2 and a number \_\_\_\_\_
5. \_\_\_\_\_ a number decreased by 2 \_\_\_\_\_
6. \_\_\_\_\_ 2 increased by a number \_\_\_\_\_
7. \_\_\_\_\_ 2 more than a number \_\_\_\_\_
8. \_\_\_\_\_ the product of a number and 2 \_\_\_\_\_
9. \_\_\_\_\_ twice a number squared \_\_\_\_\_
10. \_\_\_\_\_ half of a number \_\_\_\_\_
11. \_\_\_\_\_ twice a number \_\_\_\_\_
12. \_\_\_\_\_ 2 decreased by a number \_\_\_\_\_

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# 5-14 Matching and Evaluating Expressions *(Continued)*

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- 13. \_\_\_\_\_ a number divided by 2 \_\_\_\_\_
- 14. \_\_\_\_\_ the difference of a number and 2 \_\_\_\_\_
- 15. \_\_\_\_\_ twice the sum of a number and 2 \_\_\_\_\_
- 16. \_\_\_\_\_ 2 divided by a number \_\_\_\_\_
- 17. \_\_\_\_\_ 2 times the absolute value of a number \_\_\_\_\_
- 18. \_\_\_\_\_ the sum of a number and twice the number \_\_\_\_\_
- 19. \_\_\_\_\_ a number increased by 2 \_\_\_\_\_
- 20. \_\_\_\_\_ the product of 2 and a number squared \_\_\_\_\_
- 21. \_\_\_\_\_ a number minus 2 \_\_\_\_\_
- 22. \_\_\_\_\_ a number divided by 2 \_\_\_\_\_

Choose from these Expressions				
S. $n + 2$	A. $2 n $	E. $n - 2$	F. $2 - n$	I. $2n$
L. $n + 2n$	N. $\frac{n}{2}$	O. $(2n)^2$	P. $ 2n $	Q. $2(n + 2)$
R. $(n + 2) \div 2$	T. $2n^2$	U. $\frac{2}{n}$	X. $n^2$	

Evaluate each \_\_\_\_\_  
\_\_\_\_\_

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# What Kind of TV Show Is Relaxing To Watch?

Simplify each expression, write your answer, then mark it in the answer columns. For each set of exercises, there is one extra answer. Write the letter of this answer in the corresponding box at the right.

2	6	4	8	1	5	7	3
---	---	---	---	---	---	---	---

<b>1</b>	<p>a. <math>10 + 6 \div 2</math></p> <p>b. <math>(10 + 6) \div 2</math></p> <p>c. <math>30 - 3 \cdot 4</math></p> <p>d. <math>(30 - 3) \cdot 4</math></p>	<p>(N) 8</p> <p>(O) 18</p> <p>(R) 13</p> <p>(C) 10</p> <p>(D) 108</p>	<b>5</b>	<p>a. <math>4 + 5^2</math></p> <p>b. <math>(4 + 5)^2</math></p> <p>c. <math>32 - 16 \div 4 \cdot 2</math></p> <p>d. <math>(32 - 16) \div (4 \cdot 2)</math></p>	<p>(L) 81</p> <p>(O) 24</p> <p>(A) 11</p> <p>(E) 2</p> <p>(R) 29</p>
<b>2</b>	<p>a. <math>3 \cdot 8 + 7</math></p> <p>b. <math>3(8 + 7)</math></p> <p>c. <math>10 \cdot 3^2 - 4</math></p> <p>d. <math>\frac{20 + 30}{12 - 7}</math></p>	<p>(A) 54</p> <p>(G) 45</p> <p>(P) 10</p> <p>(C) 31</p> <p>(E) 86</p>	<b>6</b>	<p>a. <math>30 - [9 + 4(8 - 5)]</math></p> <p>b. <math>11 - 3^2 + (11 - 3)^2</math></p> <p>c. <math>\frac{10^2}{5} - \frac{6^2}{3}</math></p> <p>d. <math>\frac{10^2 - 6^2}{5 - 3}</math></p>	<p>(P) 66</p> <p>(V) 32</p> <p>(N) 8</p> <p>(G) 9</p> <p>(S) 58</p>
<b>3</b>	<p>a. <math>50 + 24 \div 6 \cdot 2</math></p> <p>b. <math>50 + 24 \div (6 \cdot 2)</math></p> <p>c. <math>17 - 5 \cdot 4 \div 2</math></p> <p>d. <math>(17 - 5) \cdot 4 \div 2</math></p>	<p>(B) 58</p> <p>(R) 24</p> <p>(M) 16</p> <p>(V) 52</p> <p>(J) 7</p>	<b>7</b>	<p>a. <math>2[5 + 2(8 - 6)]</math></p> <p>b. <math>3[20 - 4(2 + 1)]</math></p> <p>c. <math>6 + 4^3 - 1^8</math></p> <p>d. <math>(6 + 4)^3 - 1^8</math></p>	<p>(R) 18</p> <p>(L) 115</p> <p>(D) 69</p> <p>(E) 999</p> <p>(W) 24</p>
<b>4</b>	<p>a. <math>5 \cdot 6 + 9 \cdot 4</math></p> <p>b. <math>60 - 2^3 \cdot 5</math></p> <p>c. <math>\frac{9}{3} + \frac{12}{4}</math></p> <p>d. <math>\frac{9 + 12}{3 + 4}</math></p>	<p>(F) 6</p> <p>(I) 7</p> <p>(U) 66</p> <p>(K) 3</p> <p>(N) 20</p>	<b>8</b>	<p>a. <math>\frac{13 + 7^2 \div 7}{9 - 20 \div 4 + 16}</math></p> <p>b. <math>15 + (2^5 - 7) \cdot 3</math></p> <p>c. <math>\frac{36}{2} + \frac{3 \cdot 21}{11 - 2}</math></p> <p>d. <math>\frac{36 + 3 \cdot 21}{2 + 11 - 2}</math></p>	<p>(N) 25</p> <p>(R) 90</p> <p>(X) 9</p> <p>(T) 22</p> <p>(S) 1</p>

Name : \_\_\_\_\_

Score : \_\_\_\_\_

## Five-Number Summary

Level 1: S1

Write the five-number summary for each set of data.

- 1) 42, 58, 67, 55, 40, 69, 66, 51, 46, 48, 68      2) 14, 11, 8, 1, 23, 20, 17, 5, 19, 10, 12, 22

40, 42, 46, 48, 51, 55, 58, 66, 67, 68, 69

Minimum : 40

Minimum : \_\_\_\_\_

Q<sub>1</sub> : 46

Q<sub>1</sub> : \_\_\_\_\_

Q<sub>2</sub> : 55

Q<sub>2</sub> : \_\_\_\_\_

Q<sub>3</sub> : 67

Q<sub>3</sub> : \_\_\_\_\_

Maximum : 69

Maximum : \_\_\_\_\_

- 3) 107, 92, 111, 119, 99, 100, 89, 94, 125, 93      4) 72, 60, 64, 75, 79, 63, 70, 61, 78

Minimum : \_\_\_\_\_

Minimum : \_\_\_\_\_

Q<sub>1</sub> : \_\_\_\_\_

Q<sub>1</sub> : \_\_\_\_\_

Q<sub>2</sub> : \_\_\_\_\_

Q<sub>2</sub> : \_\_\_\_\_

Q<sub>3</sub> : \_\_\_\_\_

Q<sub>3</sub> : \_\_\_\_\_

Maximum : \_\_\_\_\_

Maximum : \_\_\_\_\_

- 5) 21, 4, 18, 9, 25, 16, 27, 30, 33, 15, 31      6) 134, 47, 122, 113, 49, 56, 102, 93, 62

Minimum : \_\_\_\_\_

Minimum : \_\_\_\_\_

Q<sub>1</sub> : \_\_\_\_\_

Q<sub>1</sub> : \_\_\_\_\_

Q<sub>2</sub> : \_\_\_\_\_

Q<sub>2</sub> : \_\_\_\_\_

Q<sub>3</sub> : \_\_\_\_\_

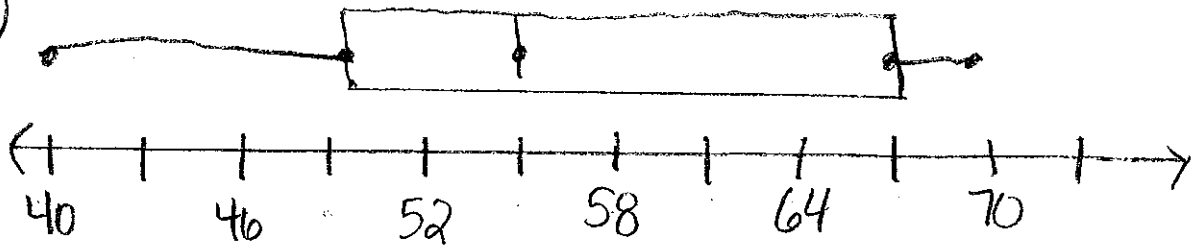
Q<sub>3</sub> : \_\_\_\_\_

Maximum : \_\_\_\_\_

Maximum : \_\_\_\_\_



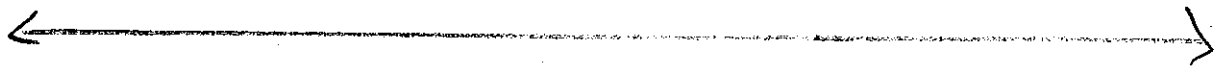
1)



2)



3)



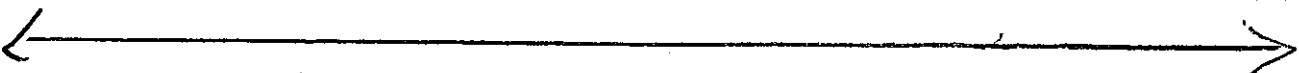
4)



5)



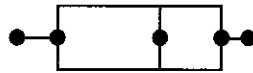
6)



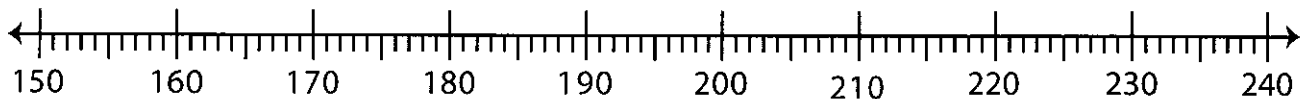
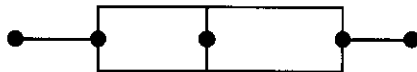
## Read and Interpret the Plot

Level 2: S1

- 1) The data of the per capita municipal solid waste (in pounds per day) generated in the United States from 1960 to 2005 (every 5 years) are collected and a box-and whisker plot is made. Read the plot and answer the questions.



- a) Write the first quartile from the given plot. \_\_\_\_\_
- b) What is the range of the data? \_\_\_\_\_
- c) What is the third quartile? \_\_\_\_\_
- 2) The weight of the basketball players (in pounds) at a University basketball team are noted to determine their physical standards. A plot is made based on the data. Read the plot and answer the questions.



- a) What is the median of the given data? \_\_\_\_\_
- b) What is the maximum weight among the players? \_\_\_\_\_
- c) What is the inter-quartile range? \_\_\_\_\_

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## 6-11 Finding the Mean, Median, Mode, and Range

Given the following information, answer the questions below. Then write the letter of the correct answer in the space above its answer to complete the statement at the end of the activity.

1. The scores of nine golfers finishing 18 holes of golf are 67, 68, 68, 68, 70, 71, 72, 77, and 78.

F. The range is \_\_\_\_\_.

E. The mode is \_\_\_\_\_.

S. The median is \_\_\_\_\_.

H. The mean is \_\_\_\_\_.

2. The weights (in kilograms) of the starting players of the basketball team are 93, 84, 79, 82, and 87.

W. The range is \_\_\_\_\_.

U. The median is \_\_\_\_\_.

I. The mean is \_\_\_\_\_.

3. Manny's history test scores for this marking period are 90, 84, 90, and 68.

R. The range is \_\_\_\_\_.

N. The mode is \_\_\_\_\_.

T. The median is \_\_\_\_\_.

A. The mean is \_\_\_\_\_.

- O. Suppose that one more test is given. What score would Manny need to have an average of 85? \_\_\_\_\_

4. Suppose the lowest of Manny's four scores is dropped.

Y. The new mean of his scores is \_\_\_\_\_.

M. The new range is \_\_\_\_\_.

Sixty-two and two-sevenths

$\frac{85}{70}$   $\frac{87}{71}$   $\frac{68}{68}$   $\frac{6}{68}$   $\frac{83}{90}$   $\frac{93}{11}$

$\frac{88}{93}$   $\frac{84}{22}$   $\frac{83}{90}$   $\frac{70}{14}$   $\frac{68}{22}$   $\frac{70}{70}$

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## Solving Proportions

Sheet 1

- 1) Isaac and his friends pitched 4 Trekker tents in 60 minutes on a camping site. How long will they take to pitch 5 tents?

\_\_\_\_\_

- 2) Fiona, an avid food blogger posted a total 216 recipes in 36 weeks. If she posted them at a constant rate, how many recipes did she upload in 15 weeks' time?

\_\_\_\_\_

- 3) Jacob strode up 24 steps in 12 seconds to reach his apartment on the second floor. How many steps did he climb in 9 seconds?

\_\_\_\_\_

- 4) Derek uses a 52 inch flat steel bar that weighs 10.4 lb to make a rack in the garage. Find the weight of a 67-inch steel bar.

\_\_\_\_\_

- 5) Mike completed an online course that contained 20 core topics in a total of 40 learning hours. How many topics did he complete in 12 hours time?

\_\_\_\_\_

- 6) Alexa bought a pack of 12 cookies for \$3.50 from the supermarket. How many packs of cookies can she buy for \$17.50?