

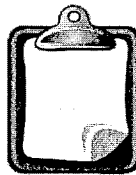
Name \_\_\_\_\_

Date \_\_\_\_\_

### Unit Rates and Ratios of Fractions - Independent Practice Worksheet

Complete all the problems. Make sure to draw pictures to help you solve the problems.

1. Ethan writes  $\frac{1}{6}$  of a page in  $\frac{1}{12}$  of a minute. How much time does it take him to write a full page?



2. William fills  $\frac{1}{3}$  of a water bottle in  $\frac{1}{6}$  of a minute. How much time will it take him to fill the bottle?



3. Michael plays  $\frac{1}{5}$  of a song in  $\frac{1}{15}$  of a minute. How much time will it take him to play an entire song?



4. Gabriel used  $\frac{1}{3}$  of a liter of milk to make  $\frac{1}{9}$  of a jug of tea. How much milk is required to fill the jug?



5. Isaac used  $\frac{1}{4}$  of an ounce of nuts to make  $\frac{1}{12}$  pound of cake. How many ounces of nuts are needed to make a cake?



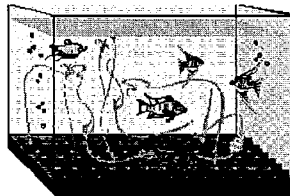
Name \_\_\_\_\_

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6. Samuel used  $\frac{1}{5}$  of an ounce of butter to make  $\frac{1}{15}$  of a pound of jelly. How many ounces of butter are needed to make a pound of jelly?



7. Jacob used  $\frac{1}{7}$  of a liter of water to fill  $\frac{1}{9}$  of the fish aquarium. How many liters of water are needed to fill the aquarium?



8. Mason used  $\frac{1}{6}$  of a gram of honey to make  $\frac{1}{12}$  of a pan of pudding. How many grams of honey are needed to make a full pan of pudding?



9. Aiden walked  $\frac{1}{8}$  of a mile in  $\frac{1}{16}$  of an hour. Compute the unit rate as the complex fraction.



10. Noah eats  $\frac{1}{3}$  of an apple in  $\frac{1}{6}$  of a minute. How much time will it take him to eat a full apple?



Name \_\_\_\_\_

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**Recognizing Proportional Relationships - Independent Practice Worksheet**

Solve all the problems.

1) Drew is an artist. He paints portraits. The table below shows the number of portraits painted in hours. Do the numbers in the table represent a proportional relationship?

<b>Number of portraits</b>	<b>Time (In Hours)</b>
1	5
2	10
3	15
4	20



2) This table shows the amount earned by Harry for selling cups of ice cream. Do the numbers in the table represent a proportional relationship?

<b>Cups sold (km)</b>	<b>Earnings (\$)</b>
3	12
5	20
7	28
9	36

3) Fred wrote notes during an examination. The table below shows number of pages written in relation to the time it took to make the notes (in hours). Does the table represent a proportional relationship?

<b>Notes (pages)</b>	<b>Time (In Hours)</b>
8	16
9	18
10	20
11	23



Name \_\_\_\_\_

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4) Alice went to market and bought comics. The table below shows the price for different numbers of comics. Do the numbers in the table represent a proportional relationship?

Number of Comics	Price (Dollars)
2	6
4	12
6	16
8	24

5) A ferry has to transport bikes on an island. The table below shows the number of bikes transported and the number of trips made by ferry. Do the numbers in the table represent a proportional relationship?

Number of bikes	Number of trips
10	5
12	6
14	7
16	8

6) The table below gives the distance covered by a train over time. Do the numbers in the table represent a proportional relationship?

Distance (km)	Time (In Hours)
50	10
60	12
70	14
80	16

7) Daisy made an envelope from sheets of paper. The table below shows the number of envelopes made by the number of sheets. Do the numbers in the table represent a proportional relationship?

Number of envelopes	Number of sheets
1	2
2	4
3	6
4	12



Name \_\_\_\_\_

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8) Joe made a fruit pie. The table below displays the number of fruits he used to make the pies. State "Yes", if the table represents a proportional relationship?

Number of pie	Number of fruit
2	10
3	15
4	24
5	25

9) Betty makes omelettes. The table below shows number of omelettes made and the number of eggs used. Does table represent a proportional relationship?

Number omelette	Number of eggs
5	10
6	12
7	14
8	24

10) Kelly goes on a morning walk. The table below shows the number of meters ran by Kelly over time. Do the numbers in the table represent a proportional relationship?

Distance (m)	Time (In minutes)
3	12
4	16
5	20
6	24



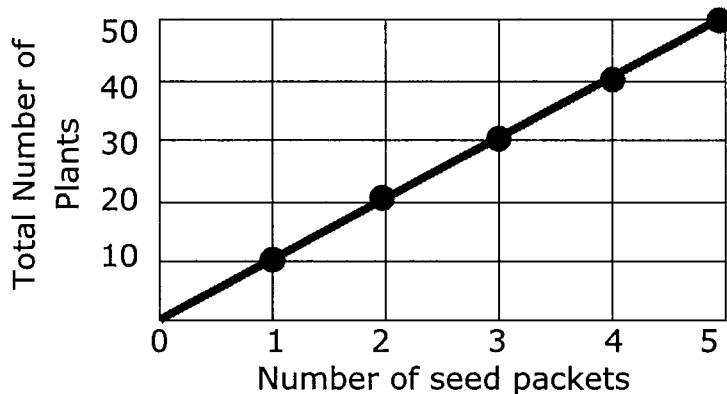
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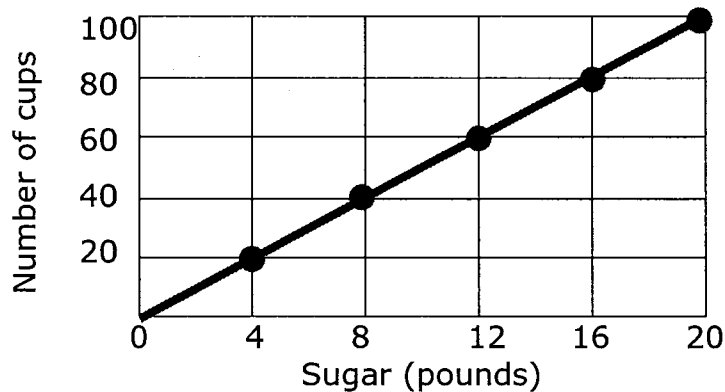
### Identify the Constant of Proportionality Independent Practice Worksheet

Complete all the problems. Make sure to draw pictures to help you solve the problems.

1. The graph below represents the total number of plants and number of seed packets used. What is the constant of proportionality?



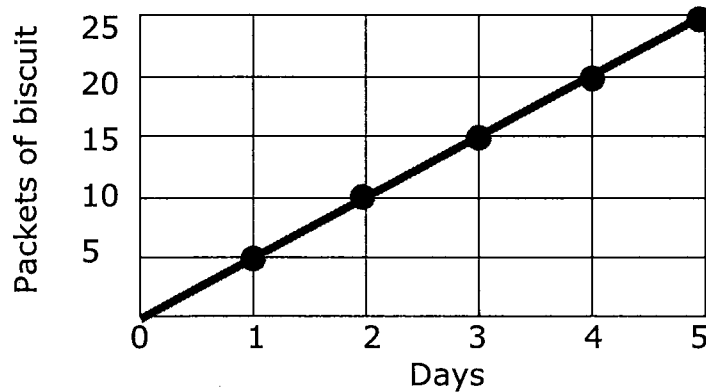
2. The graph below represents the total number of cups of coffee and the total amount of sugar required to make the coffee. What is the constant of proportionality?



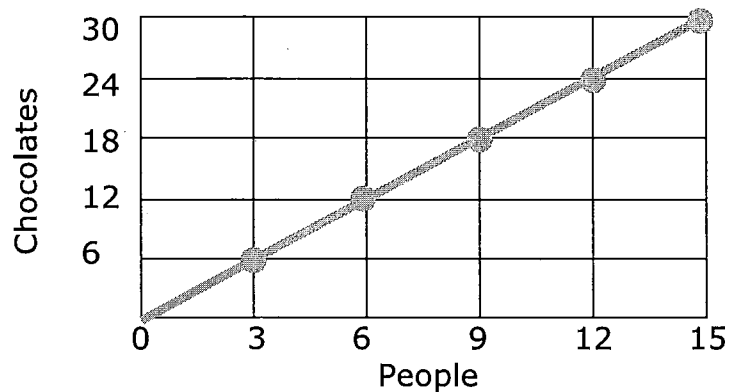
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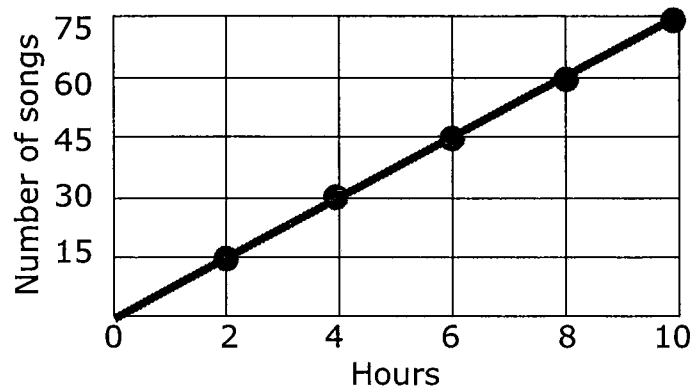
3. The graph below represents the packets of biscuits consumed over time. What is the constant of proportionality?



4. The graph below represents the chocolate consumed by people. What is the constant of proportionality?



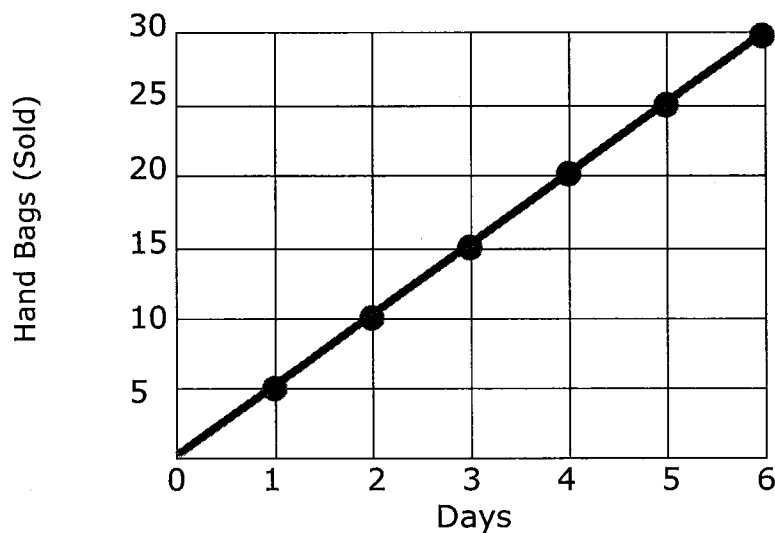
5. The graph below represents the number of songs played on a radio station. What is the constant of proportionality?



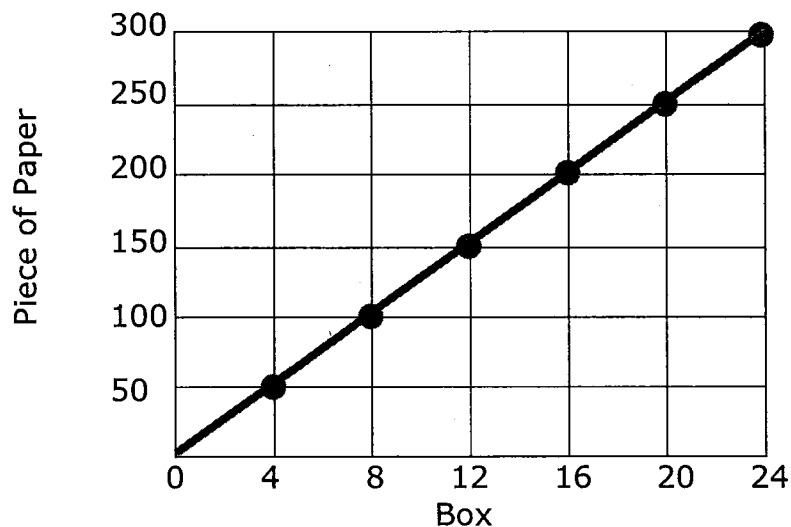
Name \_\_\_\_\_

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6. The graph below represents the number of hand bags sold over a certain number of days. What is the constant of proportionality?



7. The graph below represents the number of pieces of paper that are found in boxes. What is the constant of proportionality?

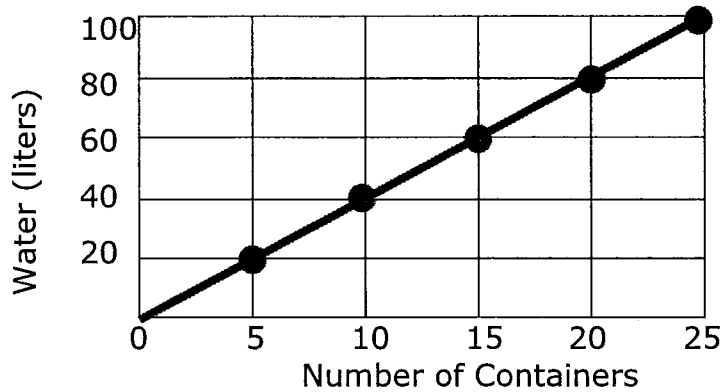




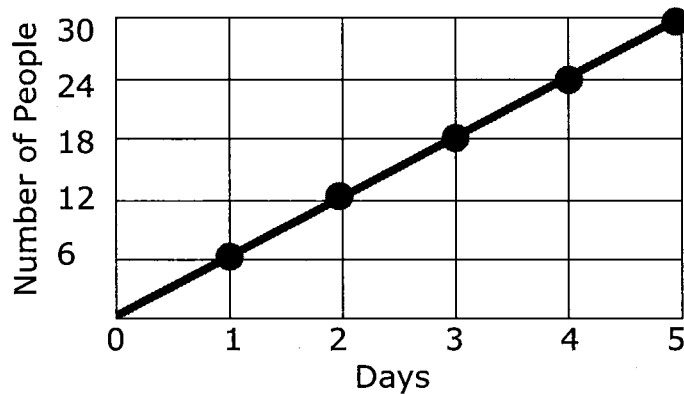
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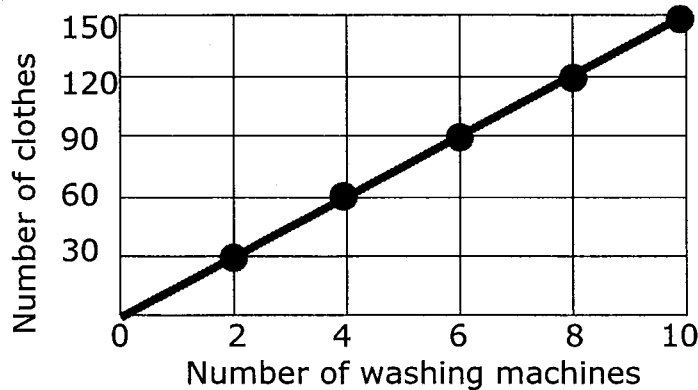
8. The graph below represents the number of containers and liters of water contained in the containers. What is the constant of proportionality?



9. The graph below represents the number of people that go to church on the week days. What is the constant of proportionality?



10. The graph below represents the number of clothes washed by the number of washing machines. What is the constant of proportionality?



Name \_\_\_\_\_

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### Proportional Relationships Word Problems - Matching Worksheet

Match the constant of proportionality (unit rate) to the situation explained.

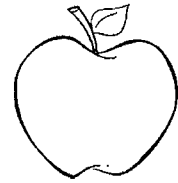
- \_\_\_\_\_ 1. The number of chocolates sold can be determined by the equation:  $P = $.63c$ , where  $P$  is the price and  $c$  is the number of chocolates. a. 6
- \_\_\_\_\_ 2. In a pizza shop, the number of pizzas prepared can be determined by the equation  $P = .30h$ .  $P$  is the number of pizzas and  $h$  is the number of cups of cheese used. b. 3
- \_\_\_\_\_ 3. Kevin is a florist. The number of flowers he uses can be determined by the equation:  $F = 4P$ , where  $F$  is the number of flowers and  $P$  is the vases in the store. c. .25
- \_\_\_\_\_ 4. Kelly distributes candies among kids. The number of candies can be determined by the equation:  $C = 6q$ , where  $C$  is the number of candies and  $q$  is the number of kids. d. .30
- \_\_\_\_\_ 5. Drew writes a book in two months. The number of pages written can be determined by the equation:  $P = .25d$ , where  $P$  is the number of pages and  $d$  is the number of days he was writing. e. 4
- \_\_\_\_\_ 6. William has a farm of hens. The number of eggs laid by the hens can be determined by the equation  $E = 3h$ , where  $E$  is the number of eggs and  $h$  is the number of hens. f. .63



Name \_\_\_\_\_ Date \_\_\_\_\_

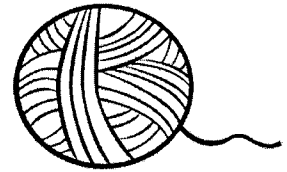
## Proportion Word Problems Worksheet 2

1. Julie sells fresh apples at the farmer's market for \$5 per pound.  
If you have \$28, how many pounds of apples can you purchase?



- \_\_\_\_\_
2. Timothy is on his school's basketball team. He usually scores 6 points per quarter. If there are 4 quarters in the game, how many points does Timothy score in one game?

- \_\_\_\_\_
3. Jenna loves to knit mittens for her friends. If she knits 3 pairs of mittens per week, how many does she make in a 4-week month?



- \_\_\_\_\_
4. Jim needs to purchase 120 ice cream cones for his school's ice cream social. If the ice cream cones come in packs of 20, how many packs does he need to buy?

- \_\_\_\_\_
5. At the bake sale, you can buy 3 cookies for \$2. How many cookies could you buy with \$11?



- \_\_\_\_\_
6. It takes Henry 3 hours to paint someone's portrait. How many hours would it take for him to paint all 8 of his friends' portraits?

- \_\_\_\_\_
7. Dr. Hanson sees one patient every 45 minutes. If he works for 7 hours per day, how many patients does he see in one day?



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**Multistep Ratio and Percent Word Problems - Independent Practice Worksheet**

Solve the following problems.

1) Hardy's plant grows rapidly. It grows by 10 cm every 2 years. How much taller will Hardy's plant be in 5 years?

2) A beaver burrows 10 holes every 5 minutes. How many holes will it burrow if time is increased to 25 minutes?

3) Gregory drinks 6 liters of water over 2 days. In how many days would he consume another 12 liters?

4) Ron's factory is currently producing 30 chairs in a day. How many chairs will be produced if production is to be increased by 130%?

5) Fred has a bakery. He sells 40 cakes in a day. If his sales increased by 120%, how many cakes will he sell in a day?

6) Henry eats  $\frac{1}{3}$  of a loaf of bread in 2 days. How many loaves of bread will he eat in 12 days?

7) Veronica's bike requires 5 liters of gas to run for 10 kilometers. How many liters of gas does Veronica need if she has to cover 24 kilometers?

8) Betty has a cow. The cow produces 5 liters of milk in a day. If his diet is improved, the cow will produce 200% more milk. How much milk would the cow make in a day, if that were to happen?

9) A machine makes 20 carpets in a day. After oiling the machine, its efficiency will go up by 150%. How many carpets will be produced at this level?

10) Samantha can write  $1\frac{1}{2}$  pages in 3 minutes. How many pages could she write in 12 minutes?



Name \_\_\_\_\_

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### Percent Error and Percent Increase- Matching Worksheet

Match the word problems to their answers. Write the letter of the answer that matches the problem. Note that \$ have been removed from answers.

- |       |   |         |
|-------|---|---------|
| _____ | 1. Margaret sold shoes for \$200. Margaret increases their sale price by 100%. What is the sales price of the pair of shoes?              | a. 39.6 |
| _____ | 2. Jasmine was expected to get \$150 for her bonus, but she only got \$100. What was the percent error?                                   | b. 25   |
| _____ | 3. Jewel buys a toy horse for \$36. The store increases their purchase price by 10%. What is the sales price of the toy horse?            | c. 96   |
| _____ | 4. Maya counts 55 passengers on the bus. There were only 50 passengers on the bus. What is Maya's percent error?                          | d. 400  |
| _____ | 5. Zoe feels like she walked 20 miles. But she actually only walked 16 miles. What is Zoe's percent error?                                | e. 132  |
| _____ | 6. Willow thought he read 23 pages of his book. But he only read 20 pages of his book. What is Willow's percent error?                    | f. 15   |
| _____ | 7. Chloe buys a globe for \$80. The store increases their purchase price by 20%. What is the new price of the globe?                      | g. 10   |
| _____ | 8. Lyric wants to purchase a radio for \$120. The store keeper increases the purchase price by 10%. What is the sales price of the radio? | h. 50   |



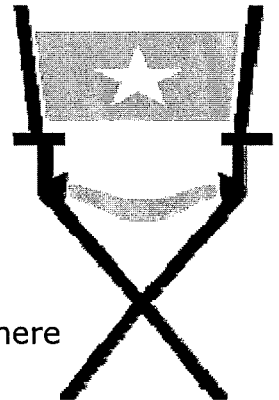
Name \_\_\_\_\_

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**Markups and Markdowns Word Problems - Independent Practice Worksheet**

Solve problems below:

- 1) A painting is on sale at 50% off. The sale price is \$320. What was the original price?
- 2) Fred buys a video game disk for \$4. There was a discount of 20%. What is the sales price?
- 3) A boat is marked up 20% on the original price. The original price was \$50. What is the sale price of the boat before sales tax?
- 4) A football is selling for 35% off the original price. The original price was \$60. What is the sale price of the football?
- 5) Timmy wants to buy a scooter and the price was \$50. When he goes to the store a second time, he found that price was marked down by 20%. What is the new price?
- 6) Andrew paid \$10 for a burger. The burgers went on sale and there was a discount of 20%. What was the sale price of the burgers?
- 7) Emily buys a toaster during the sale for 10% off. If Ellen pays \$36, what was the original price?
- 8) Zack has an old car. He wants to sell it for 60% off the current price. The market price is \$500. How much money would he receive in exchange for the car if he were able to sell it at that rate?
- 9) Drew bought a chemistry book for \$30. Later that book was marked down by 20%. By how much has the value been decreased?
- 10) What is the original price if there is a 10% discount and the sale price is \$76.50?



Name \_\_\_\_\_

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### Gratuities and Commissions, Fees, and Tax - Matching Worksheet

Match the word problems to their answers. Write the letter of the answer that matches the problem.

- \_\_\_\_\_ 1. Mr. Wilson paid \$45 for honey. This amount includes a tax of 8%. What was the cost of the honey before tax? a. 20,000
- \_\_\_\_\_ 2. After shopping in a vegetable store, Mr. Harris pays a bill before tax that is \$23.50. The vegetable tax rate is 5%. How much will the total bill be, including tax? b. 15.23
- \_\_\_\_\_ 3. An electronic salesman wants to earn \$4,000 in November. He receives a base salary of \$2000 per month as well as a 10% commission for all sales in that month. How much merchandise will he have to sell to earn the amount of money he wants? c. 41.67
- \_\_\_\_\_ 4. At a toothpaste shop, 500 tubes were sold in August. The manager is hoping to boost sales 20% in September. How many toothpaste tubes must the sales team sell in September to reach this goal? d. 24.68
- \_\_\_\_\_ 5. Mr. Martin paid \$16.14 for a star fish. This amount includes a tax of 6%. What was the price of the star fish before tax? e. 600
- \_\_\_\_\_ 6. Mr. Anderson paid \$19.18 for a CD cover. This amount includes a tax of 2%. What was the cost of the CD cover before tax? f. 18.80



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**Calculating Interest - Matching Worksheet**

Write the letter of the answer that matches the problem.

1. Find the missing box.

\$71120.4

a.

Principal	\$8452.00
Interest Rate	4.25% APR
Time in years	2
Simple Interest	

2. Paul lands a home mortgage of \$58,200 at a 7.40% interest rate. He plans to pay this after 3 years. What will the total principal + interest payment be?

b.

\$4711.01

3. Dolly borrows \$80,000 to purchase a car. The interest rate is at 9%. She plans to pay this money back after 2 years. Calculate the simple interest?

c.

\$718.42

4. Find the missing box.

d.

\$14400

Principal	\$4600
Interest Rate	3.62% APR
Time in months	8
Total Cost	





Student name \_\_\_\_\_

Score \_\_\_\_\_

**COMPARE PERCENT AND DECIMAL Worksheet 2**

COMPARE THE GIVEN PERCENTS AND WRITE WHICH ONE IS MORE

**65.4% OR 6.54**

**ANSWER 6.54**

**3.4% or .34**

**Answer \_\_\_\_\_**

**26% or .026**

**Answer \_\_\_\_\_**

**6.66% or .666**

**Answer \_\_\_\_\_**

**555.0% or .555**

**Answer \_\_\_\_\_**

**4.56% or .456**

**Answer \_\_\_\_\_**

**3.10% or 3.10**

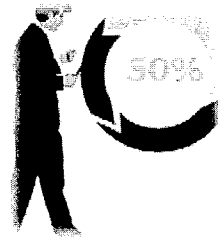
**Answer \_\_\_\_\_**



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## Percentage of Fractions Word Problems Worksheet 1



***Determine an equivalence percent value for each fraction.***

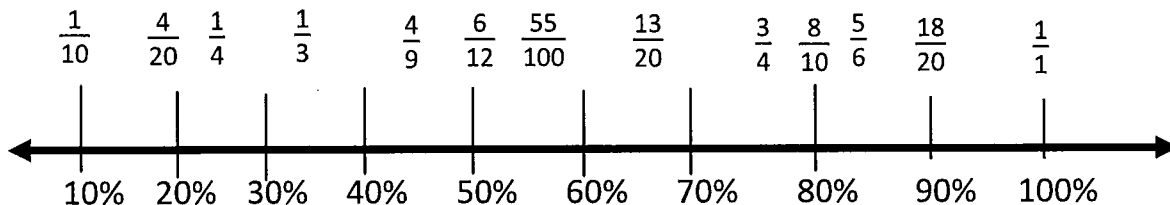
1. Stewart had 30 candies in his pocket. If he gave  $\frac{1}{5}$  of the candies to his younger sister, what percent of the candies did he give to his sister? \_\_\_\_\_
2. There are some regular and diet soft drinks in the refrigerator. If  $\frac{1}{4}$  of the soft drinks are diet, what percent of the soft drinks are diet drinks? \_\_\_\_\_
3. In a class,  $\frac{3}{10}$  of the students are girls. What percent of the students are girls? \_\_\_\_\_
4. There are different colored balls present in a box. If  $\frac{3}{5}$  of the balls are green, what percent of the balls are green? \_\_\_\_\_
5. Two students are nominees for the election of class representative. If one student gets  $\frac{3}{4}$  of total votes, what percent of the votes does this student get? \_\_\_\_\_
6. John bought a box containing strawberry and chocolate cookies from a bakery. If  $\frac{7}{10}$  of the cookies are strawberry, what percent of the cookies are strawberry? \_\_\_\_\_
7. Lisa won a lottery and spent  $\frac{1}{2}$  of the amount on shopping. What percent of the lottery amount did she spend? \_\_\_\_\_
8. Sana bought a car and got a discount of  $\frac{2}{5}$  of original price. What percent of the original price is the discount? \_\_\_\_\_
9. Karen bought pizzas last night and  $\frac{9}{10}$  of them had extra cheese topping. What percent of the pizzas had extra cheese topping? \_\_\_\_\_



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## Percents & Fractions Number Line Worksheet 1

Look at the double number line to compare the fractions and percents, using the <, >, and = symbols. Some fractions may need to be simplified.



$\frac{1}{3} \quad \bigcirc \quad 50\%$

$\frac{3}{4} \quad \bigcirc \quad 60\%$

$20\% \quad \bigcirc \quad \frac{4}{20}$

$\frac{1}{10} \quad \bigcirc \quad 5\%$

$25\% \quad \bigcirc \quad \frac{1}{4}$

$15\% \quad \bigcirc \quad \frac{18}{20}$

$\frac{1}{1} \quad \bigcirc \quad 90\%$

$\frac{5}{6} \quad \bigcirc \quad 35\%$

$67\% \quad \bigcirc \quad \frac{4}{9}$

$\frac{13}{20} \quad \bigcirc \quad 75\%$

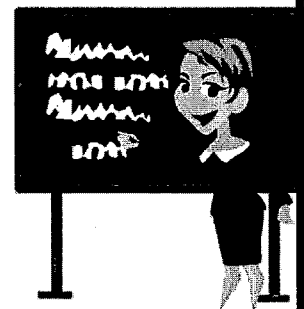
$45\% \quad \bigcirc \quad \frac{8}{10}$

$\frac{55}{100} \quad \bigcirc \quad 50\%$



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## Percent Increase & Decrease Worksheet 1



**Directions:** Find the percent increase or decrease for each problem.

1. If your grocery bill came to \$205.67 and was reduced to \$145.90

after coupons, what is the percent decrease? \_\_\_\_\_

2. Last month, 17 people showed up to help a local charity. This month, 55 people

volunteered. What is the percent increase? \_\_\_\_\_

3. Paula, the local baker, usually makes 15 loaves of bread and 10 cakes per day,

but today she made 25 loaves of bread and 12 cakes. What is the percent increase

for each bakery item?

- Bread: \_\_\_\_\_

- Cakes: \_\_\_\_\_

4. Janice usually sells 7 cars and 3 pickup trucks per week, but this week, she only

sold 5 cars and 1 pickup truck. What is the percent decrease for each vehicle?

- Cars: \_\_\_\_\_

- Pickup Trucks: \_\_\_\_\_



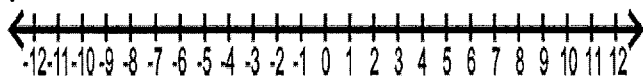
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Topic : Number line Expressions - Worksheet 1

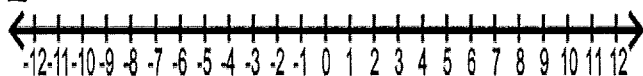
Do the following:

1.



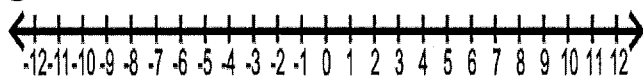
Represent  $-2 - (-3)$  on a number line

2.



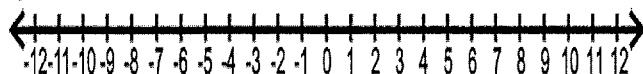
Represent  $-4 - (-5)$  on a number line

3.



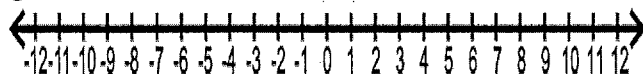
Represent  $-5 + 7$  on a number line

4.



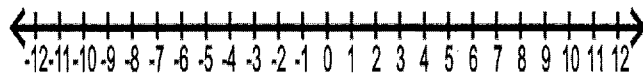
Represent  $-4 + 3$  on a number line

5.



Represent  $-6 + (-2)$  on a number line

6.



Represent  $-2 + (-1)$  on a number line

7. Find sum  $-6 + (-5)$

8. Find  $-13 + (-2)$

9. Find sum  $-11 + (-22)$

10. Find  $30 + (-4)$



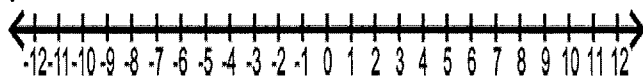
Name: \_\_\_\_\_

Date \_\_\_\_\_

Topic : Number line Expressions - Worksheet 2

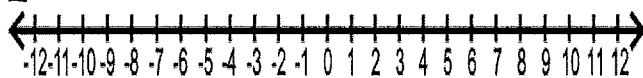
Do the following:

1.



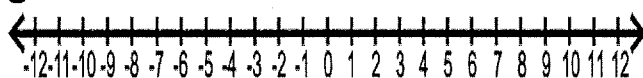
Represent  $-4 - (-5)$  on a number line

2.



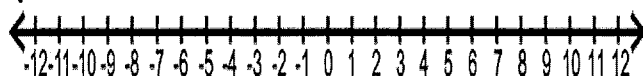
Represent  $-2 - (-6)$  on a number line

3.



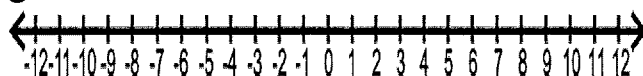
Represent  $-6 + 3$  on a number line

4.



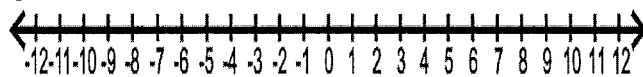
Represent  $-2 + 7$  on a number line

5.



Represent  $-3 + (-1)$  on a number line

6.



Represent  $-6 + (-5)$  on a number line

7. Find sum  $-2 + (-8)$

8. Find  $-8 + (-3)$

9. Find sum  $-12 + (-22)$

10. Find  $3 + (-15)$



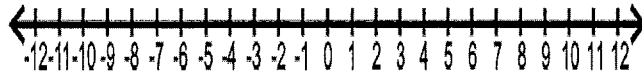
Name: \_\_\_\_\_

Date \_\_\_\_\_

Topic : Number line Expressions - Worksheet 3

Do the following:

1.



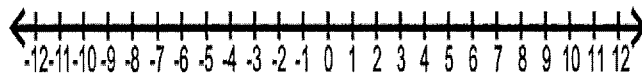
Represent  $-6 - (-2)$  on a number line

2.



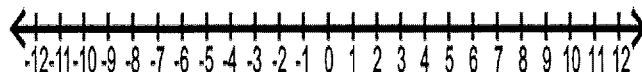
Represent  $-3 - (-8)$  on a number line

3.



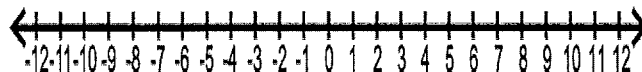
Represent  $-2 + 4$  on a number line

4.



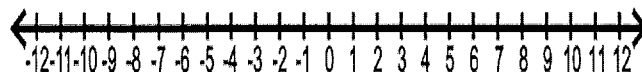
Represent  $-3 + 6$  on a number line

5.



Represent  $-1 + (-7)$  on a number line

6.



Represent  $-2 + (-8)$  on a number line

7. Find sum  $-21 + (-5)$

8. Find  $-12 + (-6)$

9. Find sum  $-3 + (-2)$

10. Find  $4 + (-1)$



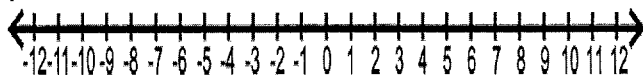
Name: \_\_\_\_\_

Date \_\_\_\_\_

Topic : Number line Expressions - Worksheet 4

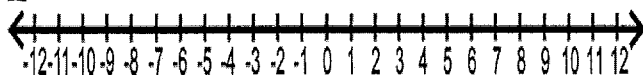
Do the following:

1.



Represent  $-5 - (-2)$  on a number line

2.



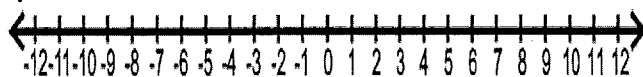
Represent  $-2 - (-5)$  on a number line

3.



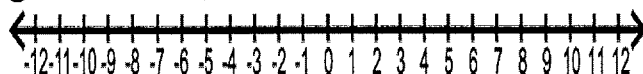
Represent  $-1 + 5$  on a number line

4.



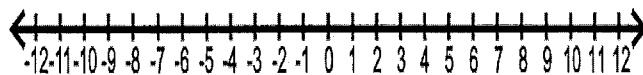
Represent  $-2 + 4$  on a number line

5.



Represent  $-5 + (-5)$  on a number line

6.



Represent  $-4 + (-6)$  on a number line

7. Find sum  $-10 + (15)$

8. Find  $-6 + (-4)$

9. Find sum  $13 + (-12)$

10. Find  $7 + (-8)$



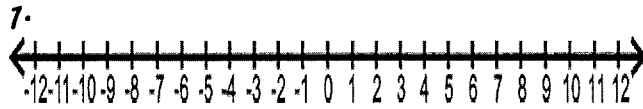


Name: \_\_\_\_\_

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Topic : Number line Expressions - Worksheet 5

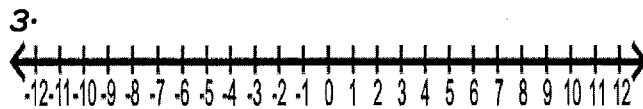
Do the following:



Represent  $-3 - (-1)$  on a number line



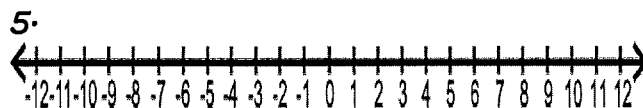
Represent  $-3 - (-7)$  on a number line



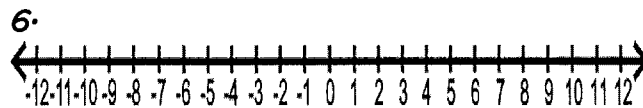
Represent  $-4 + 8$  on a number line



Represent  $-2 + 5$  on a number line



Represent  $-7 + (-2)$  on a number line



Represent  $-3 + (-9)$  on a number line

7. Find sum  $-2 + (5)$

8. Find  $-4 + (-8)$

9. Find sum  $2 + (-7)$

10. Find  $3 + (-9)$



Name \_\_\_\_\_

Date \_\_\_\_\_

**Addition and Subtraction Operations with Absolute Value Practice Sheet****Find the value of:**

1) $ -12  +  45  = \boxed{\phantom{00}}$	2) $ 37  +  67  = \boxed{\phantom{00}}$	3) $ 25  +  -77  = \boxed{\phantom{00}}$
4) $ 85  +  15  = \boxed{\phantom{00}}$	5) $ -16  +  -59  = \boxed{\phantom{00}}$	6) $ -3  +  29  = \boxed{\phantom{00}}$
7) $ 33  +  -20  = \boxed{\phantom{00}}$	8) $ -38  +  -71  = \boxed{\phantom{00}}$	9) $ 46  +  52  = \boxed{\phantom{00}}$
10) $ 42  +  39  = \boxed{\phantom{00}}$	11) $ 17  +  -9  = \boxed{\phantom{00}}$	12) $ -47  +  -19  = \boxed{\phantom{00}}$
13) $ 18  -  17  = \boxed{\phantom{00}}$	14) $ -26  -  -11  = \boxed{\phantom{00}}$	15) $ 46  -  -5  = \boxed{\phantom{00}}$
16) $ 30  -  -13  = \boxed{\phantom{00}}$	17) $ -35  -  17  = \boxed{\phantom{00}}$	18) $ 11  -  0  = \boxed{\phantom{00}}$
19) $ -42  -  24  = \boxed{\phantom{00}}$	20) $ 28  -  20  = \boxed{\phantom{00}}$	21) $ -14  -  -13  = \boxed{\phantom{00}}$
22) $ -36  -  12  = \boxed{\phantom{00}}$	23) $ 16  -  -13  = \boxed{\phantom{00}}$	24) $ 44  -  -33  = \boxed{\phantom{00}}$



Name \_\_\_\_\_

Date \_\_\_\_\_

**Division and Multiplication Operations with Absolute Value Practice Sheet 1**

1) $ 77  \div - 11  = \boxed{\phantom{000}}$	2) $- 46  \div  -2  = \boxed{\phantom{000}}$	3) $- 44  \div  -4  = \boxed{\phantom{000}}$
4) $ -36  \div - -9  = \boxed{\phantom{000}}$	5) $ -19  \div  19  = \boxed{\phantom{000}}$	6) $ 96  \div - 12  = \boxed{\phantom{000}}$
7) $ 120  \div  3  = \boxed{\phantom{000}}$	8) $- 56  \div  -8  = \boxed{\phantom{000}}$	9) $- -21  \div  -3  = \boxed{\phantom{000}}$
10) $ 100  \div  10  = \boxed{\phantom{000}}$	11) $- 14  \div - -7  = \boxed{\phantom{000}}$	12) $- -6  \div  -3  = \boxed{\phantom{000}}$
13) $ -4  \times - 4  = \boxed{\phantom{000}}$	14) $ -15  \times  2  = \boxed{\phantom{000}}$	15) $ 8  \times - -3  = \boxed{\phantom{000}}$
16) $- 6  \times - -8  = \boxed{\phantom{000}}$	17) $ -8  \times - 8  = \boxed{\phantom{000}}$	18) $ 15  \times - -3  = \boxed{\phantom{000}}$
19) $ -8  \times - 5  = \boxed{\phantom{000}}$	20) $ 9  \times - -9  = \boxed{\phantom{000}}$	21) $ -3  \times  -3  = \boxed{\phantom{000}}$
22) $ -6  \times - 3  = \boxed{\phantom{000}}$	23) $ 24  \times  -2  = \boxed{\phantom{000}}$	24) $- 9  \times - 7  = \boxed{\phantom{000}}$



Name \_\_\_\_\_

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**Reciprocals - Independent Practice Worksheet**

Complete all the problems. Give the reciprocal for the following fractions or mixed numbers:

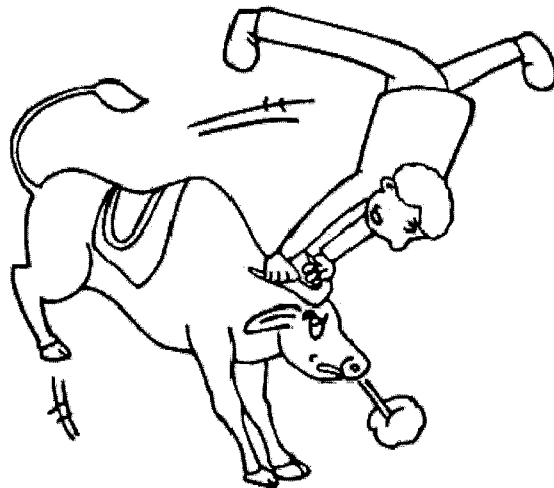
1.  $\frac{1}{8}$

2.  $\frac{4}{11}$

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

4.  $\frac{9}{5}$

5.  $3\frac{1}{6}$



Fill in the missing blanks with numbers that will make the statement true. There may be more than one correct answer.

6.  $\frac{7}{\quad} \times \frac{22}{7} = 1$

7.  $25 \times \text{---} = 1$

8.  $\text{---} \times 9\frac{4}{3} = 1$

9.  $12 \times \text{---} = 1$

10.  $\text{---} \times 8\frac{3}{9} = 1$



Name \_\_\_\_\_

Date \_\_\_\_\_

### **Simplifying Linear Expressions - Independent Practice Worksheet**

Complete all the problems.

1. Write an equivalent expression for  $4(x + 7) - 9$
2. Write an equivalent expression for  $(x + 6) - 5 + 9$
3. Write equivalent expressions for  $7a + 21$ .
4. Write equivalent expressions for  $5a + 30$ .
5. A rectangle is seven times as long as its width. One way to write an expression to find the perimeter would be  $m + 7m + m + 7m$ . Write the expression in two other ways.
6. A rectangle is five times as long as its width. One way to write an expression to find the perimeter would be  $5d + 5d + d + d$ . Write the expression in two other ways.
7. Mary says the two expressions  $4(5a - 8) + 2a$  and  $12a - 6$  are equivalent? Is she correct?
8. Jenny says the two expressions  $7a - 4 + 3a - 6$  and  $4a - 10$  are equivalent? Is she correct?
9. An equilateral triangle has a perimeter of  $9x + 6$ . What is the length of each side of the triangle?
10. An equilateral triangle has a perimeter of  $15x + 3$ . What is the length of each side of the triangle?



Name \_\_\_\_\_

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## Solving Single and Double Step Equations- Worksheet 1

Solve the following:

1.  $4x + 6 = 10$

2.  $c + 5 = 15$

3.  $2 + a = 8$

4.  $8x = 16$

5.  $a + 6 = 12$

6.  $3 + b = 18$

7.  $5 + x = 19$

8.  $7 + 4b = 34$

9.  $2 + 4c = 18$

10.  $x + 9 = 27$



Name \_\_\_\_\_

Date \_\_\_\_\_

## Solving Single and Double Step Equations- Worksheet 2

Solve the following:

1.  $2x + 8 = 20$

2.  $c + 8 = 22$

3.  $3 + a = 9$

4.  $10x = 30$

5.  $a + 8 = 16$

6.  $6 + b = 18$

7.  $7 + x = 14$

8.  $3 + 5b = 38$

9.  $3 + 6c = 27$

10.  $x + 5 = 25$



Name \_\_\_\_\_

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### Solving Single and Double Step Equations- Worksheet 3

Solve the following:

1.  $4x + 8 = 40$

2.  $c + 7 = 63$

3.  $5 + a = 15$

4.  $4x = 64$

5.  $a + 12 = 44$

6.  $5 + b = 70$

7.  $3 + x = 11$

8.  $4 + 11b = 59$

9.  $6 + 4c = 34$

10.  $x + 6 = 30$





Name \_\_\_\_\_

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## Solving Single and Double Step Equations- Worksheet 4

Solve the following:

1.  $3x + 9 = 51$

2.  $c + 15 = 97$

3.  $8 + a = 73$

4.  $9x = 99$

5.  $a + 7 = 65$

6.  $9 + b = 38$

7.  $20 + x = 77$

8.  $9 + 2b = 47$

9.  $4 + 6c = 88$

10.  $x + 10 = 39$



Name \_\_\_\_\_

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## Solving Single and Double Step Equations- Worksheet 5

Solve the following:

1.  $4x + 7 = 91$

2.  $c + 8 = 29$

3.  $7 + a = 49$

4.  $9x = 81$

5.  $a + 10 = 67$

6.  $8 + b = 57$

7.  $9 + x = 33$

8.  $4 + 2b = 74$

9.  $5 + 6c = 90$

10.  $x + 17 = 73$



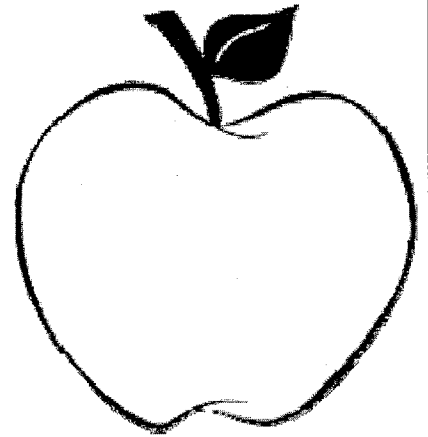
Name \_\_\_\_\_

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### Integer Word Problems- Independent Practice Worksheet

Complete all the problems.

1. Tim can eat 7 apples at a time and Barry can eat 2 apples at a time. How many more apples could Tim eat?
2. 11 times a number increased by 2 is the same as 6 more than 9 times the number. Find the number.
3. When 31 times a number is increased by 40, the answer is the same as when 200 is decreased by the number. Find the number.
4. 4 times a number increased by 2 is the same as 10 more than 2 times the number. Find the number.
5. When 4 times a number is increased by 15, the answer is the same as when 70 is decreased by the number. Find the number.
6. Daisy designs 30 cards in a day and Lisa designs 12 cards in a day. How many more cards does Daisy design than Lisa?
7. 8 times a number increased by 5 is the same as 17 more than 6 times the number. Find the number.
8. Edward has \$220 in his bank account. If he withdraws \$55 from his account, what is the balance in his account?
9. Calvin and Daniel are two mailmen. There are 94 mail pieces that have to be delivered. If Daniel delivered 43 pieces of mail, how many pieces of mail were delivered by Calvin?
10. When 2 times a number is increased by 9, the answer is the same as when 30 is decreased by the number. Find the number.



Name \_\_\_\_\_

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### Word Problems Leading to Inequalities - Matching Worksheet

Match the word problems to their answers. Write the letter of the answer that matches the problem.

1. Solve  $3.5x + 10 < -30$

\_\_\_\_\_

a. 6

2. Michelle has a \$100. She wants to purchase paper pins (\$20) and file covers (\$20) and paper weights. Each paper weight costs \$10. How many paper weights can she purchase?

\_\_\_\_\_

b.  $x > 5$

3. Richard buys one tooth cleaning kit for \$25 and a toothbrush for \$15. He spends the rest of his money on body soap. He has \$80 at the start. Each body soap is \$5. How many can he buy?

\_\_\_\_\_

c. 9

4. Solve  $-0.8x - 6 < -10$ .

\_\_\_\_\_

d.  $x < -11.43$

5. Solve  $1.6 + 4x > 14$ .

\_\_\_\_\_

e. 8

6. Jennifer wants to purchase rice (\$14) and cold drinks (\$10). She spends the rest of her money on pizza. She has \$60 at the start. Each pizza costs \$4. How many pizzas can she get?

\_\_\_\_\_

f.  $x > 3.1$

7. Angela has \$75. She wants to buy a doorbell (\$15) and hockey sticks. She spends the rest of the money on hockey sticks. Each hockey stick is \$5. How many hockey sticks can she purchase?

\_\_\_\_\_

g. 12



Name \_\_\_\_\_

Date \_\_\_\_\_

### Consecutive Integer Problems - Independent Practice Worksheet

Complete all the problems.

1. Find two consecutive even integers whose sum is 34.

2. Find three consecutive integers whose sum is 72.

3. Three consecutive integers are such that three times the smallest is 12 more than the largest. Find the integers.

4. Find four consecutive integers whose sum is 82.

5. Find three consecutive even integers whose sum is 108.

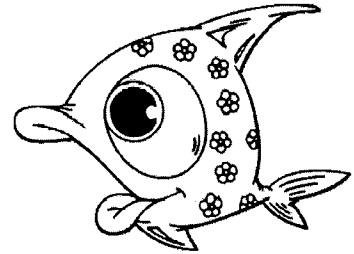
6. Find five consecutive integers whose sum is 170.

7. Three consecutive integers are such that three times the smallest is 18 more than the largest. Find the integers.

8. Find two consecutive odd integers whose sum is 96.

9. Three consecutive integers are such that three times the smallest is 22 more than the largest. Find the integers.

10. Find three consecutive odd integers whose sum is 129.



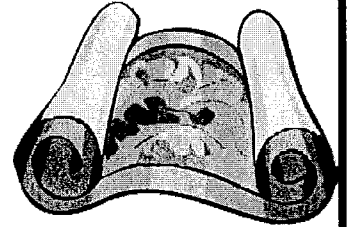
Name \_\_\_\_\_

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### Scale Drawings of Geometric Figures - Independent Practice Worksheet

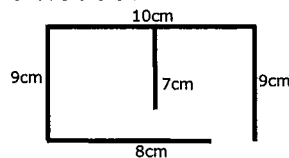
Complete all the problems. Make sure to draw pictures to help you solve the problems.

1. Logan made a treasure hunt map. The treasure is 25 cm away from his location. If each 1 cm on the scale drawing equals 5 meters, then how far he is from treasure?

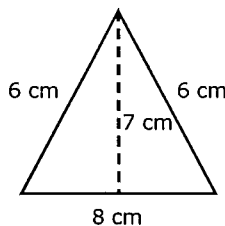


2. Jordan made a wooden square box. All sides of the wooden box are 6 cm. If he wants to increase the length of all sides by 1.6 cm, what will be the perimeter and area of the new box?

3. Abigail redecorates her house. A scale drawing of her house can be seen below. If each 6 cm on the scale drawing equals 12 ft, what are the actual dimensions of Abigail's house?



4. Olivia goes to Egypt and saw a model of triangle shaped pyramid. She enlarged it using a scale factor of 1.2. What will be the perimeter and area of the new triangle pyramid?



5. At Carter's birthday party his mom made a cake in a rectangular shape. The length of cake is 8 cm and width of cake is 6 cm. If she wants to add 1 cm of cream around the cake, what will be the perimeter and area of the rectangle cake?

6. Max makes a scale drawing of distance between Salt Lake City and Arizona. The distance between Salt Lake City and Arizona is 21 cm. If each 7 cm on the scale drawing equals 250 kilometers, how far apart are the Salt Lake City and Arizona?



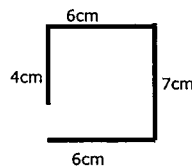
Name \_\_\_\_\_

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7. In the morning, Sophie goes to the church then goes to the school. In the afternoon she goes to school to home. The map shows the distance between school and home as 5 cm. If every 4 cm on the scale drawing equals 8 kilometers, how far apart are the school and home?

8. Gavin goes to the market and buys one rectangle shaped board. The length of the board is 16 cm and width of board is 10 cm. If he wants to add a 2 cm wooden border around the board, what will be the area of the rectangle board?

9. Andrew draws a scale drawing of his office. If each 5 cm on the scale drawing equals 10 ft, what are the actual dimensions of Andrew's office?



10. Anna is a sales person who has jobs this week in cities within North Carolina and South Carolina. On a map, these two cities are 50 centimeters apart. The map uses a scale of 2 centimeters = 4 kilometers. What is the actual distance between these cities?



Name \_\_\_\_\_

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**Geometric Shapes with Given Conditions - Independent Practice Worksheet**

You will need a piece of paper to draw your answers on.

1. Draw an equilateral triangle.
2. Draw a quadrilateral that has 4 sides, opposite sides equal, and no sides are perpendicular.
3. Which of the length measures of enclosed shapes below will create a triangle?
  - a. 1 cm, 4 cm, and 2 cm
  - b. 5 cm, 3cm, and 8 cm
4. Draw a quadrilateral which has non-parallel sides equal and its base angles are equal?
5. Which of the length measures of enclosed shapes below will create a triangle?
  - a. 5 cm, 7 cm, and 12 cm
  - b. 3 cm, 7cm, and 5 cm
  - c. 4 cm, 2 cm, 3 cm
6. Draw a scalene triangle with all 3 different sides.
7. Draw a quadrilateral whose diagonals bisect each other at right angles with all sides equal in length and opposite sides are parallel.
8. Which of the length measures of enclosed shapes below will create a triangle?
  - a. 2 cm, 3 cm, and 6 cm
  - b. 6 cm, 3cm, and 5 cm
  - c. 5 cm, 6 cm, 11 cm
9. Draw a quadrilateral with opposite sides equal and has right angles.
10. Draw a right triangle with two equal angles.





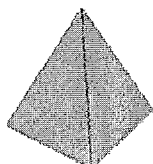
Name \_\_\_\_\_

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## Decomposing Three-Dimensional Figures - Matching Worksheet

Match the word problems to their answers. Write the letter of the answer that matches the problem.

\_\_\_\_\_ 1. If you were to view the shape from the right, what would you see?



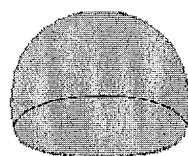
a. circle

\_\_\_\_\_ 2. View the shape from the top and identify what you would see.



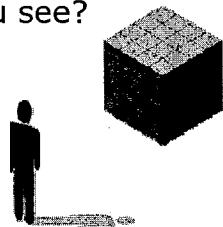
b. b

\_\_\_\_\_ 3. If you were to view the shape from the bottom, what would you see?



c. rectangle

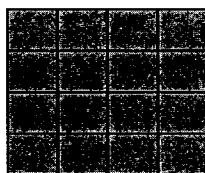
\_\_\_\_\_ 4. Look at this object from the left, what will you see?



a



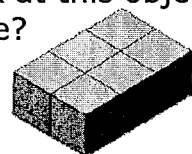
b



d.

a

\_\_\_\_\_ 5. Look at this object from the top, what will you see?



a



e.

triangle

b



Name \_\_\_\_\_

Date \_\_\_\_\_

### Area and Circumference of a Circle - Matching Worksheet

Match the word problems to their answers. Write the letter of the answer that matches the problem. Use 3.14 for pi. Units of measurements are removed.

- |       |  |           |
|-------|--|-----------|
| _____ | 1. Patricia buys a round dinner table. The radius of dinner table is 6 meters. What is the area of table?  | a. 56.52  |
| _____ | 2. Charles has a circular carpet in his drawing room. He wants to put a circular table in middle of the carpet. The diameter of the carpet is 12 meters and the diameter of the table is 4 meters. Calculate how much area of carpet is left after putting the table in place? | b. 113.04 |
| _____ | 3. Steven purchases a bowl. The diameter of the bowl is 14 cm. What is the circumference of the bowl?  | c. 43.96  |
| _____ | 4. Daniel wants to buy cookies for her friend. The radius of a cookie is 5 inches. What is the cookie's circumference?   | d. 50.24  |
| _____ | 5. Donna makes a round pizza. She wants to put a cheese layer on the pizza. If the cake is 8 cm in diameter, how many square cm of cheese layer does she need to put on the pizza?   | e. 19.625 |
| _____ | 6. Cynthia wants to buy a round photo frame for her brother. The radius of the photo frame is 9 cm. What is the photo frame's circumference?   | f. 100.48 |
| _____ | 7. Brian made a tasty burger. The diameter of the burger was 5 cm. What was the area of burger?  | g. 31.4   |



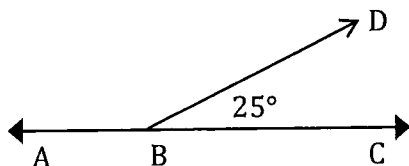
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SCORE: \_\_\_\_\_

## COMPLEMENTARY & SUPPLEMENTARY ANGLES Worksheet 1

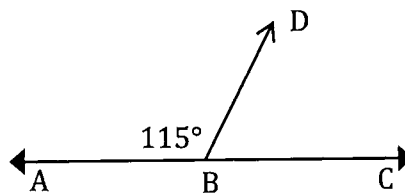
**INSTRUCTIONS:** Find the supplementary angles.

1.



$$\angle ABD = 155^\circ$$

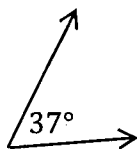
2.



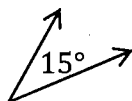
$$\angle DBC = \underline{\hspace{2cm}}$$

**INSTRUCTIONS:** Find the complement to each of the angles.

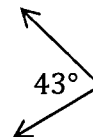
3.



4.



5.



**INSTRUCTIONS:** Are the angles supplementary, complementary or neither? Use "S", "C", and "N" to show the angle relationship.

6.  $109^\circ$  and  $71^\circ$

7.  $19^\circ$  and  $71^\circ$

8.  $89^\circ$  and  $1^\circ$

9.  $34^\circ$  and  $56^\circ$

10.  $75^\circ$  and  $75^\circ$

11.  $16^\circ$  and  $74^\circ$

12.  $90^\circ$  and  $90^\circ$

13.  $65^\circ$  and  $115^\circ$

14.  $123^\circ$  and  $47^\circ$

15.  $46^\circ$  and  $44^\circ$

Name \_\_\_\_\_

Date \_\_\_\_\_

**2D and 3D Area, Volume and Surface Area - Matching Worksheet**

Write the letter of the answer that matches the problem.

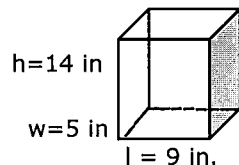
\_\_\_\_\_ 1. A triangle has an area of 15 square feet.  
The height is 8 feet. What is the length of the base? a. 10.44

\_\_\_\_\_ 2. A triangle has an area of 9 square feet.  
The height is 6 feet. What is the length of the base? b. 27

\_\_\_\_\_ 3. The surface area of a cube is  $30 \text{ in}^2$ .  
What is the volume of the cube? c. 3

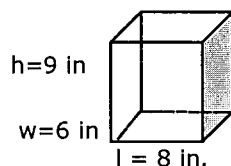
\_\_\_\_\_ 4. The surface area of a cube is  $54 \text{ in}^2$ .  
What is the volume of the cube? d. 14.46

\_\_\_\_\_ 5. Kenny wants to wrap his mom's present.  
Wrapping paper is three cents per square inch. How much will the wrapping paper cost Kenny?



e. 3.75

\_\_\_\_\_ 6. Ron made a cake and put it in a box.  
Jarvis wants to cover the box with baseball cards. Baseball cards cost three cents per square inch. How much will it cost Jarvis to cover the box in baseball cards?



f. 11.18

