



NCCVT

SENIOR MATH UNIT 4:  
PERCENTS, RATIOS, PROPORTIONS AND RATES

July 2010



4.1.1 Study: The Meaning of Percent  
Math Foundations II (S1001159)

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

Date: \_\_\_\_\_

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 2

Draw the symbol for percent. \_\_\_\_\_

Page 3

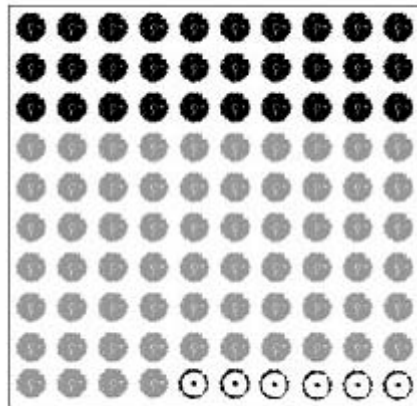
The Latin words per centum mean \_\_\_\_\_ ".

Page 3

Percent tells you the \_\_\_\_\_ out of 100.

Page 4

This flower garden has one hundred flowers. In the spaces below, tell what percentage of the flowers are black, gray, or white.



Black \_\_\_\_\_ % Gray \_\_\_\_\_ % White \_\_\_\_\_ %

Page 6

Write the following percents as fractions.

a) 14% = \_\_\_\_\_

b) 26% = \_\_\_\_\_

c) 7% = \_\_\_\_\_

Page 8

If you make twelve out of twelve shots, you have made \_\_\_\_\_ %.

Page 9

Fill in the percentages below.

Full of juice = \_\_\_\_\_ %

Half full of juice = \_\_\_\_\_ %

No juice = \_\_\_\_\_ %



4.1.2 Checkup: Practice Problems

Math Foundations II (S1001159)

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

Date: \_\_\_\_\_

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 - 4, write the fraction as a percent.

1.  $\frac{23}{100}$

2.  $\frac{31}{100}$

3.  $\frac{88}{100}$

4.  $\frac{72}{100}$

For questions 5 - 10, answer the questions about percents.

5. John made 24 out of 100 free throws in basketball. What percent of shots did he miss?

6. Jonathon missed 12 of the 100 questions on a test. What percent did he answer correctly?

7. As a hockey goalie, Eduardo blocked 46 of 100 shots. What percent of shots did he not block?

8. A baseball team won 38 of its 100 games in a season. Write the fraction of the games the team lost, using 100 as a denominator.

9. Bradley made 68 putts out of 100 attempts. Write the fraction of the putts that he missed, using 100 as a denominator.

10. If Angela answered 95 questions correctly on a 100-question test, what fraction of questions did she miss? (Write the fraction with a denominator of 100)



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

Date: \_\_\_\_\_

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 2

Write each of these percents as a fraction in simplest form.

a) 25% = \_\_\_\_\_

b) 50% = \_\_\_\_\_

c) 75% = \_\_\_\_\_

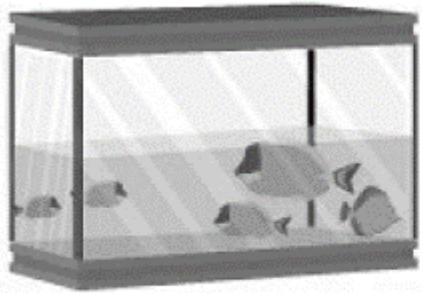
d) 100% = \_\_\_\_\_

Page 3

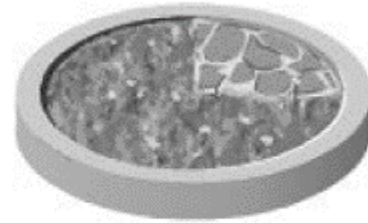
You can use the same picture to represent both \_\_\_\_\_ and the \_\_\_\_\_.

Page 5

Estimate the percent shown in each picture. Remember to use the % sign.



\_\_\_\_\_



\_\_\_\_\_

Page 7

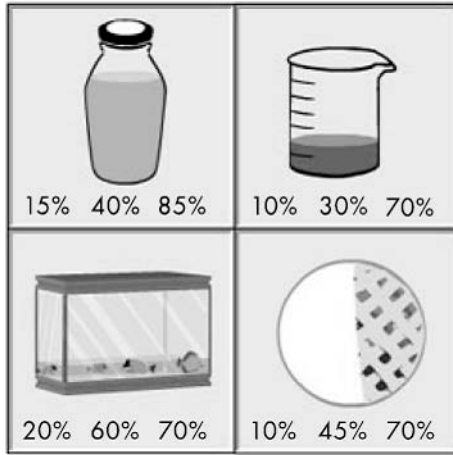
If more than  $\frac{3}{4}$  of an item is shaded, it is more than \_\_\_\_\_ %.

Page 8

If less than  $\frac{1}{2}$  of an item is shaded, it is less than \_\_\_\_\_ %.

Page 11

Circle the correct answer in each problem.



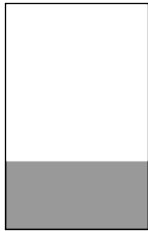
4.2.2 Checkup: Practice Problems  
Math Foundations II (S1001159)

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

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

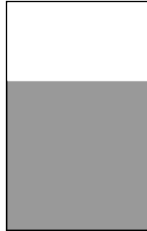
For questions 1 - 10, choose the best estimate of the percent of the figure that is shaded.

1. Approximately what percent of the box is shaded?



- Answer choices:  
30%  
50%  
70%  
90%

2. Approximately what percent of the box is shaded?



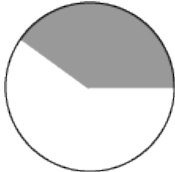
- Answer choices:  
15%  
40%  
65%  
95%

3. Approximately what percent of the box is shaded?



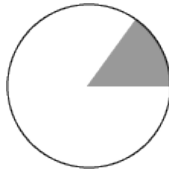
- Answer choices:  
20%  
45%  
60%  
85%

4. Approximately what percent of the circle is shaded?



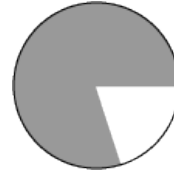
- Answer choices:  
15%  
40%  
60%  
85%

5. Approximately what percent of the circle is shaded?



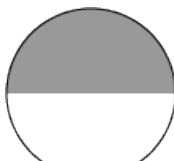
- Answer choices:  
15%  
45%  
55%  
70%

6. Approximately what percent of the circle is shaded?

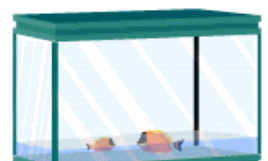


- Answer choices:  
20%  
45%  
55%  
80%

7. Approximately what percent of the circle is shaded?



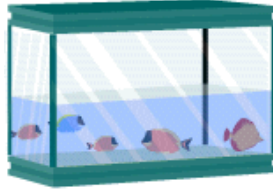
8. Approximately what percent of the fish tank is filled?



Answer choices:

- 15%
- 35%
- 50%
- 75%

Approximately what percent of the fish tank is filled?

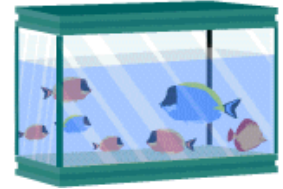


9. Answer choices:
- 20%
  - 40%
  - 55%
  - 85%

Answer choices:

- 15%
- 40%
- 50%
- 75%

Approximately what percent of the fish tank is filled?



10. Answer choices:
- 25%
  - 45%
  - 55%
  - 80%

Study Sheet

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

Date: \_\_\_\_\_



4.3.1 Study: Working with Percents

Math Foundations II (S1001159)

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 1

Percent tells the portion of \_\_\_\_\_ .

Page 2

Drag the ball all the way to the left so that the whole circle is green.

Green = \_\_\_\_\_ % Blue = \_\_\_\_\_ %

Drag the ball all the way to the right so that the whole circle is blue.

Green = \_\_\_\_\_ % Blue = \_\_\_\_\_ %

Drag the ball to the middle so that half the circle is green and half is blue.

Green = \_\_\_\_\_ % Blue = \_\_\_\_\_ %

Page 3

Show two pairs of percentages that add to make 100%.

a) \_\_\_\_\_ % + \_\_\_\_\_ % = 100%

b) \_\_\_\_\_ % + \_\_\_\_\_ % = 100%

Page 4

Fill in the percentages from the example, making sure they add up to 100%.

a) \_\_\_\_\_ % + \_\_\_\_\_ % + \_\_\_\_\_ % = 100%

b) \_\_\_\_\_ % + \_\_\_\_\_ % = 100%

c) \_\_\_\_\_ % + \_\_\_\_\_ % + \_\_\_\_\_ % + \_\_\_\_\_ % + \_\_\_\_\_ % = 100%

Fill in the blanks.

- a)  $24\% + \text{_____} \% + 21\% = 100\%$
- b)  $65\% + 13\% + 10\% + 7\% + \text{_____} \% = 100\%$
- c)  $47\% + \text{_____} \% + 39\% = 100\%$

Fill in the blanks.

- a)  $46\% + \text{_____} \% = 100\%$
- b)  $30\% + 45\% + \text{_____} \% = 100\%$
- c)  $31\% + 21\% + 14\% + \text{_____} \% = 100\%$



4.3.2 Checkup: Practice Problems  
Math Foundations II (S1001159)

Checkup

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

Date: \_\_\_\_\_

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 - 4, a class voted for either pizza, hamburgers, or salad as their favorite lunch. Answer the questions based on this vote.

- 1. If 23% voted for pizza and 37% voted for hamburgers, what percent voted for salad?
- 2. If 31% voted for salad and 45% voted for hamburgers, what percent voted for pizza?

- 3. If 14% voted for pizza and 61% voted for salad, what percent voted for hamburgers?
- 4. If 21% voted for salad and 24% voted for hamburgers, what percent voted for pizza?

For questions 5 - 10, use what you know about percents to answer the questions.

- 5. 10% of people in the rain wear a rain jacket. Another 74% are under an umbrella. If the rest have ponchos, what percent of the people in the rain have ponchos?
- 6. 24% at the game are wearing blue caps. 40% are wearing red caps. If the rest of the people are wearing brown caps, what percentage of people at the game wear brown caps?

- 7. 35% of people voted for Jim for class
- 8. At lunch, 24% of students spent their extra

President, and 23% voted for Eric. If the rest voted for Amelia, what percent voted for Amelia?

time studying. 35% play basketball. If the rest take a nap, what percent of students take a nap?

9. 54% of auto rentals are sedans. 24% are trucks. If the rest are vans, what percent of auto rentals are vans?

10. Erica pays 28% of the utilities in the house. Rebecca pays 34% of the utilities. If Brendan pays the rest, what percent of the utilities does he pay?



4.4.1 Study: Relating Fractions Decimals and Percents  
Math Foundations II (S1001159)

Study Sheet

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

Date: \_\_\_\_\_

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 1

Zero means we have \_\_\_\_\_ .

One means we have a \_\_\_\_\_ .

Any number between zero and one means we have a \_\_\_\_\_ of a whole.

Page 2

What are three ways we can write a part of a whole?

\_\_\_\_\_

Page 3

How do you write none?

Percent: \_\_\_\_\_ %

Decimal: \_\_\_\_\_

Fraction: \_\_\_\_\_

How do you write one whole?

Percent: \_\_\_\_\_ %

Decimal: \_\_\_\_\_

Fraction: \_\_\_\_\_

Page 4

Percent, decimal, and fraction forms all express the part in relation to \_\_\_\_\_ .

38% Percent means the portion " \_\_\_\_\_ " .

0.38 This decimal goes out to the \_\_\_\_\_ place.

$\frac{38}{100}$  The \_\_\_\_\_ , that is, the whole, is 100.

What do you get when you fill in forty-eight squares in the grid?

Percent: \_\_\_\_\_ Decimal: \_\_\_\_\_ Fraction: \_\_\_\_\_

What is another way we can write  $\frac{20}{100}$  as a fraction? \_\_\_\_\_

Fill in the missing percents and decimals in this chart.

percent	decimal	fraction
		$\frac{7}{10}$
		$\frac{1}{2}$
		$\frac{4}{5}$
		$\frac{1}{4}$

Which sentence from the example sounds silliest to you? \_\_\_\_\_



4.4.2 Checkup: Practice Problems

Math Foundations II (S1001159)

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

Date: \_\_\_\_\_

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 - 4, convert the fraction to a decimal and a percent.

1.  $\frac{34}{100}$

2.  $\frac{21}{100}$

3.  $\frac{76}{100}$

4.  $\frac{98}{100}$

For questions 5 - 7, convert the decimal to a percent and a fraction with denominator of 100.

5. 0.44

6. 0.12

7. 0.61

For questions 8 - 10, convert the percent to a decimal and a fraction with denominator of 100.

8. 28%

9. 71%

10. 83%



4.5.1 Study: Common Fractions Decimals and Percents

Study Sheet

Math Foundations II (S1001159)

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

Date: \_\_\_\_\_

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

You can write a part of a whole number as a fraction, \_\_\_\_\_, or \_\_\_\_\_.

How do you write  $\frac{1}{4}$  as a percent? \_\_\_\_\_.

The decimal pattern for the fourths is to add \_\_\_\_\_ each time.

Page 4

How do you write  $\frac{2}{10}$  as a percent? \_\_\_\_\_.

Page 5

The percent pattern for the tenths is to add \_\_\_\_\_ each time.

Page 6

What fraction is almost equal to 33%? \_\_\_\_\_

Page 7

The decimal pattern for the thirds is to add \_\_\_\_\_ each time.

Page 8

Fill in the missing fraction, decimal, or percent.

$\frac{1}{10} = \underline{\hspace{2cm}} = 10\%$        $\underline{\hspace{2cm}} = .50 = 50\%$

$\frac{3}{4} = .75 = \underline{\hspace{2cm}}$



4.5.2 Checkup: Practice Problems  
Math Foundations II (S1001159)

Checkup

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

Date: \_\_\_\_\_

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 - 10, fill in the missing number in each table. Write any fractions in simplest terms.

1.

Fraction	$\frac{1}{4}$
Decimal	?
Percent	25%

2.

Fraction	?
Decimal	0.30
Percent	30%

3.

Fraction	$\frac{1}{5}$
Decimal	0.20
Percent	?

4.

Fraction	?
Decimal	$0.\bar{3}$
Percent	$33.\bar{3}\%$

5.

Fraction	$\frac{7}{10}$
Decimal	?
Percent	70%

6.

Fraction	?
Decimal	0.75
Percent	75%

7.

Fraction	$\frac{9}{10}$
Decimal	0.9
Percent	?

8.

Fraction	?
Decimal	0.5
Percent	50%

9.

Fraction	$\frac{2}{3}$
Decimal	?
Percent	$66.\bar{6}\%$

10.

Fraction	?
Decimal	0.8
Percent	80%



4.6.1 Study: Introduction to Ratios  
Math Foundations II (S1001159)

Study Sheet

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

Date: \_\_\_\_\_

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 1

One way to compare two amounts is to find the \_\_\_\_\_.

Page 2

The other way to compare two amounts is to write a(n) \_\_\_\_\_.

Page 3

To write the same ratio with smaller numbers, you can \_\_\_\_\_ the fraction.

Page 4

The three types of comparisons that a ratio can make are:

a) a \_\_\_\_\_ to a \_\_\_\_\_,

b) a \_\_\_\_\_ to a \_\_\_\_\_, and

c) a \_\_\_\_\_ to a \_\_\_\_\_,

Page 5

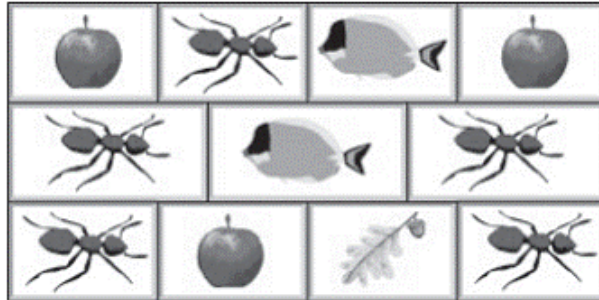
The three ways to write a ratio are: using the word \_\_\_\_\_, with a \_\_\_\_\_, or as a \_\_\_\_\_.

When writing a ratio, the \_\_\_\_\_ of the numbers is very important.

If a question asks about a certain item first, that number should be written \_\_\_\_\_ in the ratio.

Which two groups pictured fit the ratio 2:5?

\_\_\_\_\_ and \_\_\_\_\_



4.6.2 Checkup: Practice Problems  
Math Foundations II (S1001159)

Checkup

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

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 - 10, find the ratio.

1. In German class there are 20 students, 8 girls and 12 boys. What is the ratio of girls to boys?
2. 20 people go to dinner. 6 order seafood and 14 order steak. What is the ratio of steak to seafood?
3. At school there are 135 boys and 180 girls, for a total of 315 students. What is the ratio of girls to boys?
4. The bowling league has 40 members, 22 adults and 18 children. What is the ratio of children to adults?
5. The hiking club has 15 members, 10 girls and 5 boys. What is the ratio of girls to boys?
6. 8 people go to a movie, 6 boys and 2 girls. What is the ratio of girls to boys?

7. The car rental agency has 60 cars, 44 mid-size and 16 compact. What is the ratio of compact cars to mid-size cars?

8. There are 14 pairs of shoes in the closet. 8 are red and 6 are black. What is the ratio of red to black shoes?

9. A class has 12 girls and 20 boys, for a total of 32 students. What is the ratio of boys to girls?

10. The furniture store sells 25 mattresses and 10 sofas, for a total of 35 sales. What is the ratio of mattresses to sofas?



4.7.1 Study: Comparing Ratios  
Math Foundations II (S1001159)

Study Sheet

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

Date: \_\_\_\_\_

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 1

A \_\_\_\_\_ is a comparison of two groups of things.

The ratio of forks to knives is 3 to 5. Write this ratio in two ways: \_\_\_\_\_ .

Page 4

In order to compare two fractions that have different denominators,

convert them to \_\_\_\_\_ fractions that have the same \_\_\_\_\_ .

Page 7

In order to check if two ratios are equivalent, you need to put the ratios in \_\_\_\_\_

form and then \_\_\_\_\_ the fractions.

Page 10

Fill in the blanks to convert the ratio to a percentage:

$$\frac{2}{5} \bullet \text{---} = \frac{\text{---}}{100} = \text{---} \%$$

Write the ratio as a percentage:  $\frac{2}{3} =$  \_\_\_\_\_

Page 12

Answer the questions using the chart below.

	Sandwiches	Salads	Desserts
Lunchroom A	4	3	5
Lunchroom B	6	5	15
TOTAL	10	8	20

Is the ratio of sandwiches to salads greater than the ratio of salads to desserts in Lunchroom A?

\_\_\_\_\_

What about Lunchroom B?

How would you write the ratio of sandwiches to desserts in Lunchroom B as a fraction in its simplest form?

What percentage of all sandwiches are found in Lunchroom A?

What percentage of all desserts are found in Lunchroom B?



4.7.2 Checkup: Practice Problems  
Math Foundations II (S1001159)

Checkup

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

Date: \_\_\_\_\_

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 - 3, determine which of the two ratios is larger, or whether they are equivalent.

1.  $\frac{2}{3}$  and  $\frac{4}{5}$

2.  $\frac{5}{8}$  and  $\frac{10}{16}$

3.  $\frac{3}{7}$  and  $\frac{2}{5}$

For questions 4 - 7, convert the ratio to a percentage.

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

5.  $\frac{3}{10}$

6.  $\frac{29}{50}$

7.  $\frac{18}{25}$

For questions 8 - 10, use the table below, which shows the lunch choices for people who work at two different auto shops.

	Pasta	Sandwich	Pizza
Shop A	4	4	8
Shop B	8	6	6
Total	12	10	14

**8.** Write the ratio of pasta to sandwiches in Shop B as a fraction in simplest form.

**9.** What percentage of sandwiches is eaten by Shop A?

**10.** Which is greater: The ratio of pasta to pizza in Shop B, or the ratio of total pizza to total sandwiches?



4.8.1 Study: Proportions  
Math Foundations II (S1001159)

Study Sheet

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

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 2

When two ratios are equivalent, we say they form a \_\_\_\_\_ .

We indicate a \_\_\_\_\_ by putting an \_\_\_\_\_ between two equivalent ratios.

Page 3

The product of a numerator and a denominator on opposite sides of an equality in a

proportion is called a \_\_\_\_\_ .

In proportions, the two cross products must be \_\_\_\_\_ .

Page 4

Calculating \_\_\_\_\_ provides you with a test to see if two ratios ill form a \_\_\_\_\_ .

Page 6

To find the value of  $x$  in a proportion, multiply to find the \_\_\_\_\_ of the proportion.

Page 14

Most problems involving calculating percentages can be solved using proportions and the formula:

---

Page 15

Solve the problems below:

If dinner costs \$25 and you want to leave a 16% tip, how much money should you leave for the tip?

If dinner costs \$40 and you leave a \$6 tip, what percentage are you tipping?



**4.8.2 Checkup: Practice Problems**  
Math Foundations II (S1001159)

Checkup

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

Date: \_\_\_\_\_

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 - 6, solve for  $x$  in the proportion.

1.  $\frac{x}{6} = \frac{8}{10}$

2.  $\frac{x}{3} = \frac{4}{12}$

3.  $\frac{5}{x} = \frac{12}{20}$

4.  $\frac{4}{3} = \frac{10}{x}$

5.  $\frac{9}{4} = \frac{x}{12}$

6.  $\frac{5}{7} = \frac{20}{x}$

For questions 7 - 9, solve the problem using a proportion.

7. Dinner costs \$30 and you want to leave a 14% tip. How much money should you leave as a tip?

8. If you bought a \$55 table and paid an additional \$4 in tax, what percentage was the tax?

9. The sales tax on a \$12,000 car is 4%. How much money do you spend on taxes to buy the car?



4.9.1 Study: Rates  
Math Foundations II (S1001159)

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

Date: \_\_\_\_\_

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 1

A ratio that compares two different types of objects is called a \_\_\_\_\_ .

Rates are written with \_\_\_\_\_ , which are simply what each part of the rate represents.

Page 2

In a rate, instead of using the word *to*, the word \_\_\_\_\_ is usually used.

Page 4

A rate that is reduced so that the denominator is 1 is a \_\_\_\_\_ .

Page 8

What are common rates used for speed? \_\_\_\_\_

Page 9

The wage a person receives is a rate that compares \_\_\_\_\_ to \_\_\_\_\_ .

Page 10

If two rates are equivalent, they form a proportion and the \_\_\_\_\_ of a proportion are \_\_\_\_\_ .

Page 12

If you know that two rates are equivalent, you can simply set up a \_\_\_\_\_ and solve.



4.9.2 Checkup: Practice Problems  
Math Foundations II (S1001159)

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

Date: \_\_\_\_\_

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided. For questions 1 - 4, reduce the rate to its unit rate form.

1. 200 miles per 4 hours

2. 8 bananas per \$2

3. \$55 per 5 tickets

4. 30 minutes per 5 laps

For questions 5 - 7, determine which rate is bigger.

5. \$80 per 5 hours or \$120 per 8 hours

6. \$60 per 10 hours or \$80 per 12 hours

7. \$50 per 14 pizzas or \$80 per 20 pizzas

For questions 8 - 10, solve the problem using rates.

8. You can pay \$10 for 2 movie tickets. Assuming the same rate, how

9. You can pay \$30 for 4 shirts. Assuming the same rate, how much

10. It costs \$20 to ride 5 miles in a cab. Assuming the same rate, how

much would you pay for 5 movie tickets?

would you have to pay to buy 10 shirts?

much would it cost to drive 18 miles?



4.10.1 Study: Similarity and Scale Factors  
Math Foundations II (S1001159)

Study Sheet

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

Date: \_\_\_\_\_

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 1

If two objects have the same shape but are different sizes, they are \_\_\_\_\_.

Similar objects have \_\_\_\_\_ sides, which are the sides that have the same relative position.

Page 3

In order for two objects to be similar, the \_\_\_\_\_ of all corresponding sides must be equivalent.

Page 4

How do you test to see if two figures are similar?

Find the \_\_\_\_\_ between the corresponding sides.

If the \_\_\_\_\_ are \_\_\_\_\_, the figures are \_\_\_\_\_.

Page 5

The ratio of the corresponding sides of similar objects is called the \_\_\_\_\_.

Page 6

Any shape that is multiplied by a scale factor will produce a shape that is \_\_\_\_\_.



4.10.2 Checkup: Practice Problems  
Math Foundations II (S1001159)

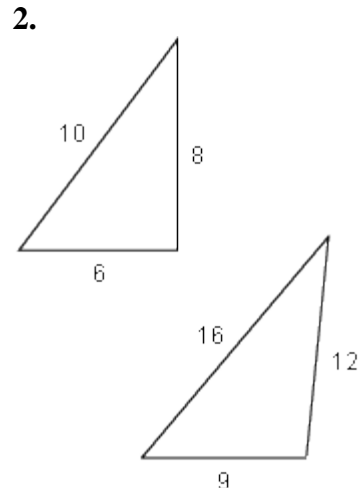
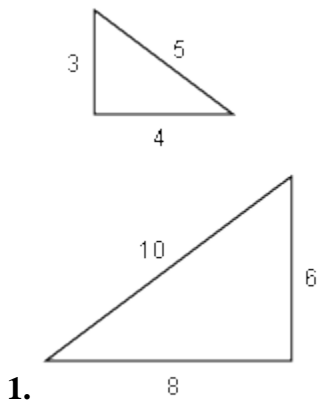
Checkup

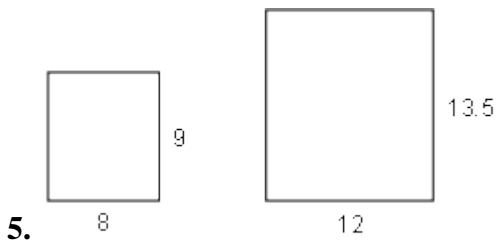
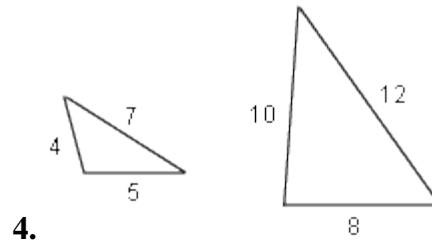
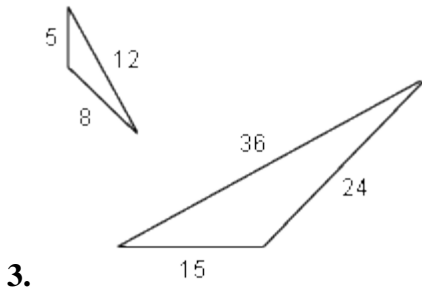
Name: \_\_\_\_\_

Date: \_\_\_\_\_

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

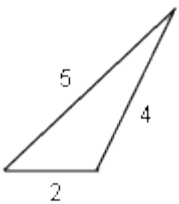
For questions 1 - 5, determine whether the two figures are similar. If they are similar, indicate their scale factor.



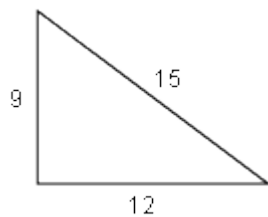


For questions 6 - 10, find the dimensions of a similar triangle.

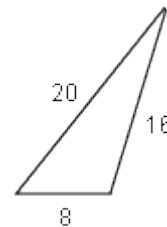
6. Given the triangle below, what should be the dimensions of a similar triangle with a scale factor of 4?



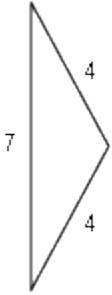
7. Given the triangle below, what should be the dimensions of a similar triangle with a scale factor of  $\frac{1}{3}$ ?



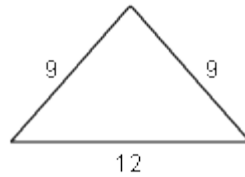
8. Given the triangle below, what should be the dimensions of a similar triangle with a scale factor of  $\frac{3}{4}$ ?



9. Given the triangle below, what should be the dimensions of a similar triangle with a scale factor of 3?



10. Given the triangle below, what should be the dimensions of a similar triangle with a scale factor of  $\frac{4}{3}$ ?



4.11.2 Practice: Assignment  
Math Foundations II (S1001159)  
Points possible: 30

Practice Assignment

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

Answer the following questions using what you've learned from this unit. Write your responses in the space provided.

1. (10 points) Two car dealers in town are offering different sales on the same model of car. Sandra can buy the car from Al's Cars, which normally sells the car for \$11,000 but will offer a 15% discount. Or she can buy the car from CarWorld, where the car sells for \$12,500 and the dealership offers a 20% discount.

A. What is the price of the car at each dealership after the markdown?

B. How much money will Sandra save by going to the correct car dealer?

2. (15 points) You invest \$5,000 in a savings account that earns 6% interest each year.

A. How much money do you have in your savings account after the first year?

**B.** How much money do you have in your savings account after the second year?

**C.** How much money do you have in your savings account after the fourth year?

**3. (5 points)** Herman and Rosie need to wash the walls on the side of the school. Herman has a power washer, which could complete the job in 10 hours. Rosie has a manual scrubber, which could complete the job in 15 hours. If they work together, how many hours will it take them to clean the wall?