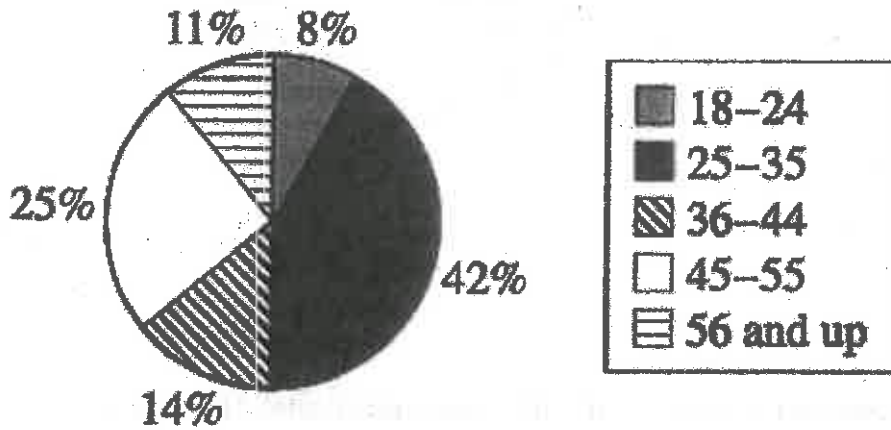


Name: _____

Date: _____ Per: _____

Ratios/Proportions Study Guide

1. The circle graph below shows the distribution of registered voters, by age, for a community. Registered voters are randomly selected from this distribution to be called for jury duty. What is the ratio (in the age range: not in the age range) that the first person called for jury duty is in the range of 18-24 years?



Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	side
		Word	angle
		Phrase	ratio
		Ratio	

2:23

Skills Needed: Create ratio from information given

Name: _____

Date: _____ Per: _____

Ratios/Proportions Study Guide

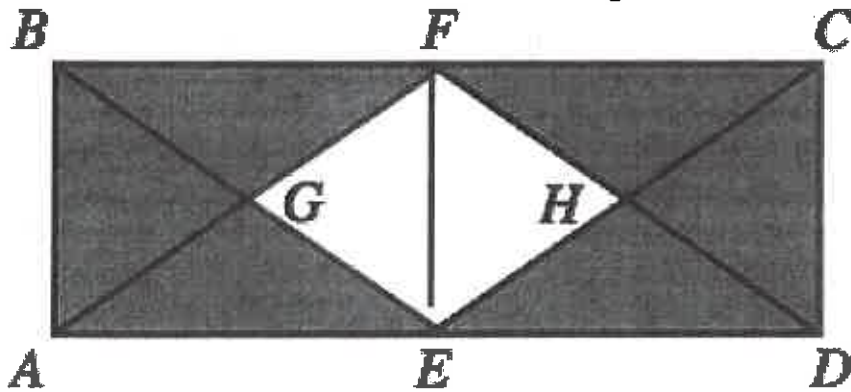
2. Janelle cut a board 30 feet long into 2 pieces. The ratio of the lengths of the 2 pieces is 2:3. What is the length, to the nearest foot, of the shorter piece?

Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	side
		Word	angle
		Phrase	ratio
		Ratio	

12

Skill Needed: *Use ratios to find missing value*

3. In the figure below, points E and F are the midpoints of sides AD and BC of rectangle ABCD, point G is the intersection of AF and BE, and point H is the intersection of CE and DF. The interior of ABCD except for the interior of EGFH is shaded. What is the ratio of the unshaded regions to the shaded regions?



Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	side
		Word	angle
		Phrase	ratio
		Ratio	

1:3

Skill Needed: *Create a ratio from information given*

Name: _____

Date: _____ Per: _____

Ratios/Proportions Study Guide

4. The lengths of the corresponding sides of 2 similar right triangles are in the ratio of 2:5. If the hypotenuse of the smaller triangle is 5 inches long, how many inches long is the hypotenuse of the larger triangle?

Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	side
		Word	angle
		Phrase	ratio
		Ratio	

12.5 in

Skill Needed: Use ratios to find missing value

5. Jerome, Kevin, and Seth shared a submarine sandwich. Jerome ate $\frac{1}{3}$ of the sandwich, Kevin ate $\frac{1}{4}$ of the sandwich, and Seth ate the rest. What is the ratio of Jerome's share to Kevin's share to Seth's share?

Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	side
		Word	angle
		Phrase	ratio
		Ratio	

4:3:5

Skill Needed: Create a ratio from information given

Name: _____

Date: _____ Per: _____

Ratios/Proportions Study Guide

6. A kid who is 4 feet tall stands next to a telephone pole. The person casts a shadow that is 3 feet long, and the telephone pole casts a shadow that is 18 feet long. How long is the telephone pole? Three hours later, the same 4-foot tall person stands next to the same telephone pole. The person now casts a shadow that is 2 feet long. Will the length of the shadow cast by the telephone pole also be decreased by one foot? Explain your answer.

Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	side
		Word	angle
		Phrase	ratio
		Ratio	

either ↙ ↘

a. 24 ft

b. No, proportions are mult/div, not add/subt
12ft.

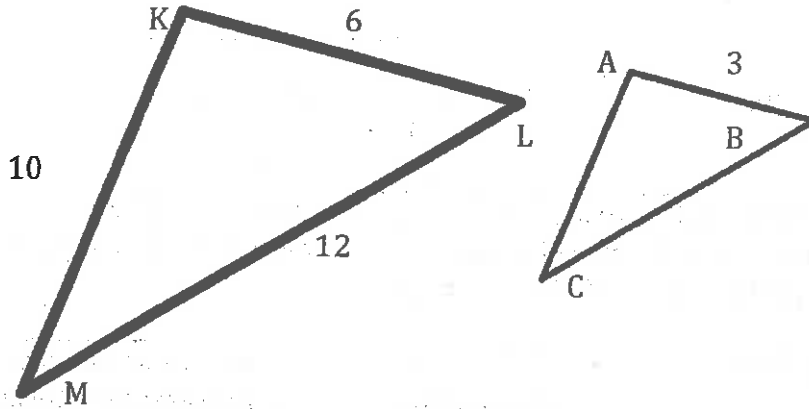
Skill Needed: Use proportions to find missing value

Name: _____

Date: _____ Per: _____

Ratios/Proportions Study Guide

7. In the figure below where Triangle ABC ~ Triangle KLM, lengths given are in centimeters. What is the perimeter, in centimeters of Triangle ABC?
 (Note: The symbol ~ means "is similar to")



Know	Need to Know	My answer should be:	My answer should represent (circle one):
		<u>Number</u>	<u>side(s)</u>
		Word	angle
		Phrase	ratio
		Ratio	

14cm

Skill Needed: Use proportions to find missing value

Name: _____

Date: _____ Per: _____

Ratios/Proportions Study Guide

8. There are 560 runners registered for a race, and the runners are divided into 4 age categories, as shown in the table below.

Age Category	Under 16	16-25	26-35	Over 35
Number of runners	80	152	224	104

The prize committee has 60 prizes to award and wants the prizes to be awarded in proportion to the number of runners registered in each category. How many prizes should be designated for the Under 26-35 age category?

Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	prizes
		Word	angle
		Phrase	ratio
		Ratio	people

24 prizes

Skill Needed: Use proportions to find missing value.

9. Television screen sizes are the diagonal length of the rectangular screen. Hector recently changed from watching a television with a 13-inch screen to a television with a similar 19-inch screen. If a boxcar appeared 6 inches long on the 13-inch screen, how long, to the nearest inch, will it appear on the 19-inch screen?

Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	length
		Word	angle
		Phrase	ratio
		Ratio	

9 in

Skill Needed: Use proportions to find missing value.

Name: _____

Date: _____ Per: _____

Ratios/Proportions Study Guide

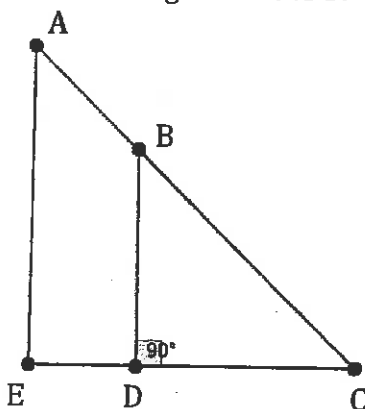
10. As a salesperson, your commission is directly proportional to the dollar amount of sales you make. If your sales are \$80, your commission is \$10. How much commission would you earn if you had \$120 in sales?

Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	side
		Word	angle
		Phrase	ratio
		Ratio	money

~~100~~ \$15

Skills Needed: Use proportions to find missing value

11. In right triangle ACE below, BD is parallel to AE, and BD is perpendicular to EC at D. The length of AC is 30 feet, the length of BD is 3 feet, the length of CD is 4 feet, and the length of BC is 5. What is the length in feet, of DE?



$\frac{3}{5} = \frac{4}{x}$

Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	side
		Word	angle
		Phrase	ratio
		Ratio	

20ft

Skill Needed: Use proportions to find missing value

Name: _____

Date: _____ Per: _____

Ratios/Proportions Study Guide

12. A poll of 100 registered voters was taken before the election for mayor of Springdale. All 100 voters indicated which 1 of the 4 candidates they would vote for. The results of the poll are given in the table below.

Candidate	Number of voters
Blackcloud	25
Lue	40
Gomez	20
Whitney	15

If the poll is indicative of how the 5,000 registered voters of Springdale will actually vote in the election, how many votes will Whitney receive in the election?

Know	Need to Know	My answer should be:	My answer should represent (circle one):
		Number	side
		Word	angle
		Phrase	ratio
		Ratio	people

750

Skill Needed:

Use proportions to find missing value

Skills Bank:

Create a ratio from information given

Use proportions/ratios to find missing value