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1)

**SAT problem**

The original price of a jacket is discounted by 20 percent, giving a sale price of \$88.

The original price of the jacket.

A

\$108

B

Which statement is true?

- (A) A is greater than B.  
 (B) B is greater than A.  
 (C) A and B are equal.  
 (D) There is not enough information to tell which is greater.

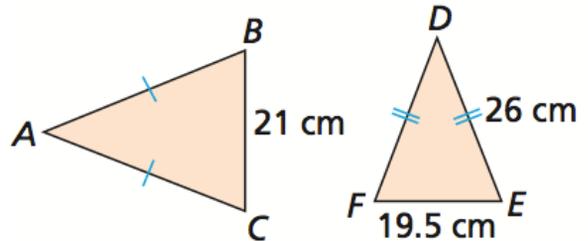
- 2) The table below lists the flour needed to make dough for a given number of dog biscuits. Find the value of  $c$  and  $b$ .

<b>Biscuits</b>	32	48	$b$
<b>Flour (cups)</b>	2	$c$	5



- 3) Which is the better deal: \$6.48/36 oz. or \$8.16/48 oz.?

- 4) The triangles below are similar. Find the perimeter of  $\triangle ABC$ .



5) Choose a positive whole number. Increase the number by 15%. Then decrease the new value by 15%. Why is the resulting value less than the original number?

6) Nine markers cost \$11.52. How much should 7 markers cost at that rate?

Seven apples cost \$5. How many apples should I be able to buy for \$8 at that rate?

7) The Otis family drove to Orlando then back to Naples. They traveled a total of 375 miles and used 15 gallons of gas. Calculate a unit rate to determine their car's average gas mileage in miles per gallon.



8)

## SAT problem

An entire 5 pound bag of sugar is to be divided equally among 3 students in a cooking class.

The number of pounds of sugar each of these students will receive.

A

 $1\frac{1}{2}$ 

B

Which statement is true?

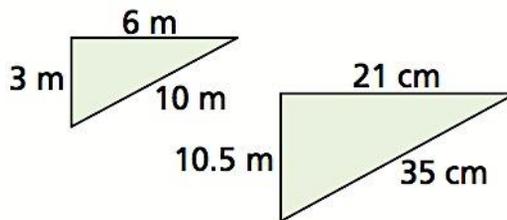
- (A) A is greater than B.  
 (B) B is greater than A.  
 (C) A and B are equal.  
 (D) There is not enough information to tell which is greater.

- 10) Using the table below, write four proportions that could be used to determine  $x$ .

Rockhopper penguins	Total penguins
3	10
$x$	50



- 9) Determine if these polygons are similar.

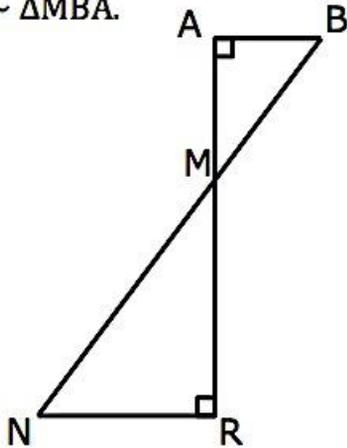


- 11) ABCD and MNOP are similar rectangles.  $ABCD \sim MNOP$ . The length of side AB is 4 cm, and the length of side MN is 15 cm. If the area of ABCD is  $48 \text{ cm}^2$ , what is the area of MNOP?

- 12) A toy store buys stuffed animals from a manufacturer for \$2.40 each. They then sell the stuffed animals for a retail price of \$12.00. What percent increase does this represent?



- 13)  $\triangle MNR \sim \triangle MBA$ .



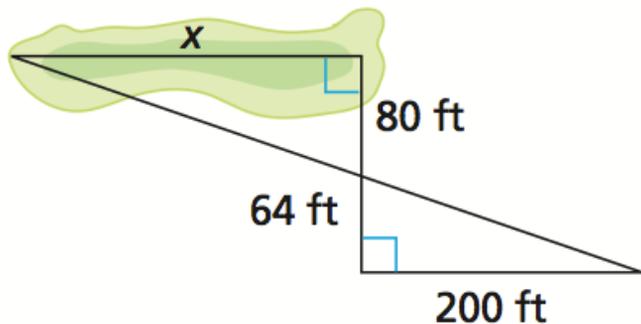
Which line segment corresponds to  $\overline{MN}$ ? \_\_\_\_\_

Which line segment corresponds to  $\overline{NR}$ ? \_\_\_\_\_

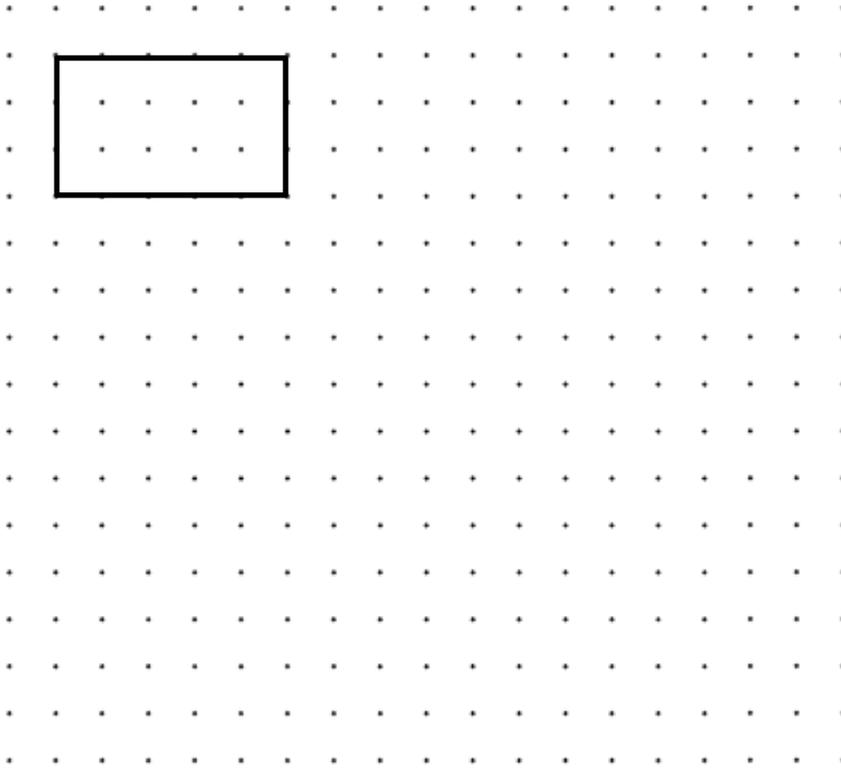
Which line segment corresponds to  $\overline{RM}$ ? \_\_\_\_\_

If  $\angle B = 70^\circ$ , what is the measure of  $\angle N$ ?

- 14) Find the unknown length  $x$ .



- 15) Use the dot grid to draw one rectangle that is similar, but not congruent, to the one below and one rectangle that is not similar to the one below. Label the rectangles you drew “similar” and “dissimilar”.



- 16) A 24,000 gallon pool is being filled at a rate of 40 gallons per minute. At this rate, how many minutes will it take to fill this pool  $\frac{3}{4}$  full?

