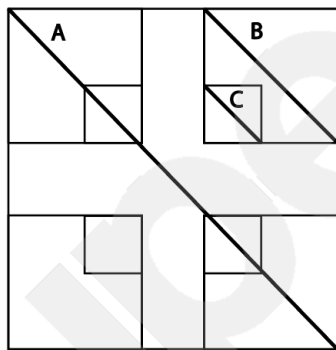


Ratios, Rate, and Proportions Practice Problems

- Tony spent \$30.00 on his last trip to karaoke. There was a one-time base fee of \$5 to rent the room. The rest of his money was spent on singing a number of songs. If each song took 5 minutes to sing and he spent 4 hours and 10 minutes singing, how much did each song cost? (*no calculator*)
 - \$0.83
 - \$0.50
 - \$0.25
 - \$0.67
- For her essay, Jamie typed 1386 words in 21 minutes. Assuming Jamie is able to continue to work at this rate for the next hour and a half, which of the following best approximates the number of words she would type in that hour and a half? (*calculator*)
 - 66
 - 3960
 - 5940
 - 29,106

- A designer wants to make the pattern shown below. Specifically, he wants the ratio of square diagonal $A:B$ and $B:C$ to equal $\sqrt{3}$. If the diagonal of square $A = 9$ inches, approximately how long should the diagonal of square C be? (*no calculator*)

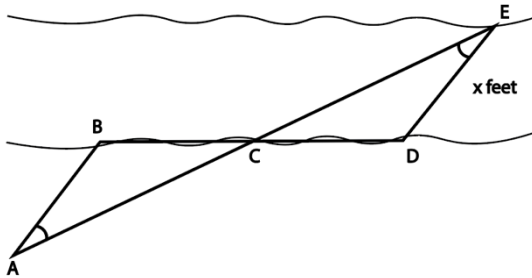


- 3 in
- 4 in
- 5 in
- 6 in

- Johnny is trying to figure out how efficient his orange trees produce fruit. Johnny counts the number of full-grown oranges on 375 orange trees and finds that 285 of the orange trees had more than 10 oranges. According to Johnny's survey, what is the ratio of orange trees with more than 10 oranges to orange trees with less than 10 oranges? (*calculator*)
 - 19:25
 - 57:75
 - 19:6
 - 57:18
- The ratio of grams of protein in chicken breast to the grams of protein in turkey breast is 3 to 2. If 100 grams of chicken breast has 31 grams of protein, approximately how many grams of protein are in 100 grams of turkey breast? (*calculator*)
 - 21
 - 20.67
 - 46.3
 - 0.05
- A filled tank can hold 200 liters of water. A faucet is turned on, and water flows into the tank at a rate of 5 liters per minute. Approximately how many liters of water will be in the tank after 0.583 hours? (*calculator*)
 - 2.91 liters
 - 40 liters
 - 175 liters
 - 200 liters
- If an object's density is proportional to its mass divided by its volume, what is the volume, in liters, of an object with a mass of 21 grams and a density of 3 grams per milliliter if there are 1000 milliliters in 1 liter? (*no calculator*)
 - 7
 - 0.14
 - 0.007
 - 0.0063

Ratios, Rate, and Proportions Practice Problems

8. An explorer wants to find the length, x , in feet, across a river as represented in the sketch below. The lengths represented by AB , BC , CE , and CD on the sketch were determined to be 600 feet, 800 feet, 1300 feet, and 1200 feet, respectively. Segments AE and BD intersect at C , and $\angle BAC$ and $\angle CED$ have the same measure. What is the value of x ? (*calculator*)



- a. 600
b. 900
c. 1000
d. 1200
9. A truck travelling at an average speed of 50 miles per hour for 2.5 hours and consumed diesel at the rate 24 miles per gallon. Approximately how many gallons of diesel does the truck use for the entire 2.5-hour trip? (*calculator*)
- a. 3.0
b. 4.8
c. 5.2
d. 6.0
10. In a random sample of 500 high school seniors, 400 of them planned on attending a university after high school. Assuming the same proportion exists when considering all high school seniors, how many of the 600 high school seniors that make up the entire class should we expect to plan to attend university after high school? (*calculator*)
- a. 333
b. 480
c. 500
d. 52