

Chapter 4 Test: Variables and Ratios

Name: Key 11/30

Per: _____

Write an algebraic expression to represent the length shown below. (Do not use a \cdot equal sign in your answer).

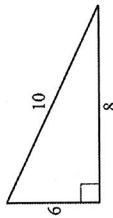


$x+x+x+x+9$ (+)
 $4x+9$

Which of the following is the variable expression for "5 less than n "?

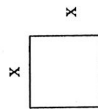
- A. $n - 5$ (+)
- B. $5 - n$
- C. $n \div 5$
- D. $5 + n$
- E. None of these

Write an expression that could be used to find the perimeter of the triangle below. (Do not use an equal sign in your answer).



$10 + 6 + 8$ (+)

A square has side lengths of n units for each side. Write at least three expressions for the perimeter of the square.

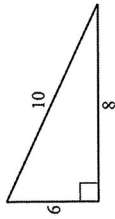


- A. $x + x + x + x$ (+)
- B. $4x$
- C. $x(x)$
- D. $2x + 2x$

Are the expressions $x + x + x + x$ and $4x$ equivalent? How do you know?

yes, they are equivalent. (+)
 I know because...

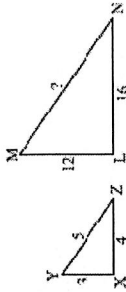
Reduce this triangle so that the new height is 3 units. How long is the new base?



The new base is (+)
 4 units. $3 \times \frac{8}{6} = 4$

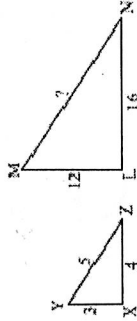
Triangles XYZ and LMN are similar. How was triangle XYZ enlarged to create triangle LMN?

- A. Add 12 to each side length (+)
- B. Add 9 to each side length
- C. Multiply each side length by 4
- D. Divide each side length by 4

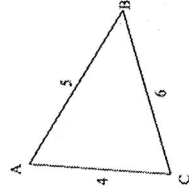


Triangles XYZ and LMN are similar. How long is the missing side?

$5 \times 4 = 20$ (+)
 The missing side length is 20 units.



Triangle ABC has been reduced to create triangle LMN. By what ratio was triangle ABC reduced? (That is, what is the ratio of the smaller to the larger?) Circle ALL that apply.



- A. 3:6 (+)
- B. 6:3
- C. 2:4 (+)
- D. 4:2
- E. 2.5 to 5 (+)
- F. 5 to 2.5