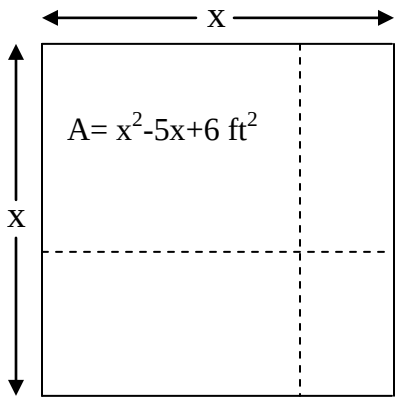
Algebra I, Module 3, Lesson 6 - Factor to Solve Problems
Assessment Test Answers

1. Omar has been contracted to install the mirror in the Carter's bathroom. He needs to make 2 cuts from a square piece of mirror. If the area of the new mirror is A= x^2-5x+6 ft^2, what size cuts can be made from one size to fit the space?

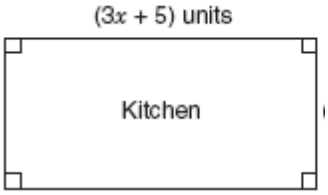


Answers:

A 6 ft Incorrect, (-6) (1) = -6 not 6.
B 5 ft Incorrect, you need to factor 6.
C 3 ft Correct! The answers are 3 and 2.
D 1 ft Incorrect, (-6) (1) = -6 not 6.

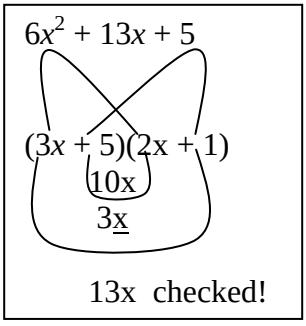
2. Tammy drew a floor plan for her kitchen, as shown below. Which expression represents the other dimension of Tammy's kitchen floor?

$A = 6x^2 + 13x + 5$

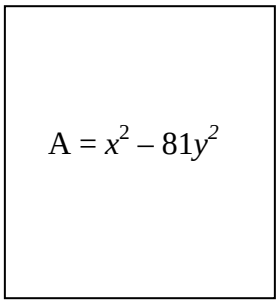


Answers:

A $2x + 1$ Correct! Nice checking!
B $2x - 1$ Incorrect, the wrong sign was used.
C $3x + 1$ Incorrect, $(3x)(3x) = 9x^2$ not $6x^2$.
D $3x - 1$ Incorrect, $(3x)(3x) = 9x^2$ not $6x^2$.



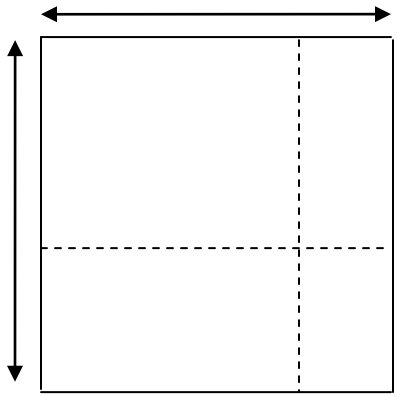
3. Roberto drew a floor plan for his bedroom, as shown below. Which expression represents the dimensions of Roberto's bedroom floor?



Answers:

A	(x +3y)(x - 27y)	Incorrect, you need to eliminate middle term.
B	(*x* - 9*y*)(*x* - 9*y*)	Incorrect, (-9y)(-9y) = + $81y^2$.
C	(*x* + 9*y*)(*x* - 9*y*)	Correct. This is the difference of squares.
D	(*x* -3*y*)(*x* +27*y*)	Incorrect, you need to eliminate middle term.

4. The area of glass needed for a window pane is given by the following equation $x^2 - 11x + 28 = 0$. What is the length of one of the cuts needed to make this rectangle from a square piece of material?

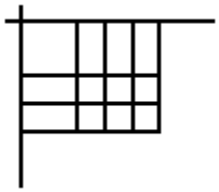


Answers:

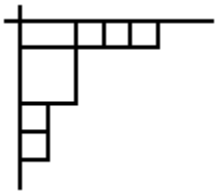
A	x = 28	Incorrect, you need to factor 28.
B	x = 14	Incorrect, 14 is a factor of 28 but not the correct one.
C	x = 4	Correct! 28 factors into -7 and -4.
D	x = 2	Incorrect, 2 is a factor of 28 but not the correct one.

5. Given the algebra tile models below, which figure represents (x + 2)(x +3)?

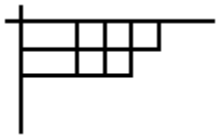
A



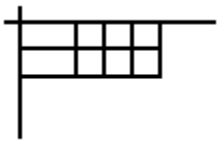
B



C



D



Answers:

A Correct! The top is (x+3) and the side is (x+2).
B Incorrect, this is not a rectangle.
C Incorrect, this is not a rectangle.
D Incorrect, this is 2(x + 3).