

## Warm-Up

January 9, 2018

A.  $(2x^2 + 4x - 3) + (2x^2 + 7x - 2)$

$$2x^2 + 4x - 3 + 2x^2 + 7x - 2$$

$$\boxed{2x^2 + 2x^2} \boxed{+ 4x + 7x} \boxed{- 3 - 2}$$

$$4x^2 + 11x - 5$$

B.  $(-3x^2 + 5x - 3) - (7x^2 - 7x + 2)$

$$-3x^2 + 5x - 3 - 7x^2 + 7x - 2$$

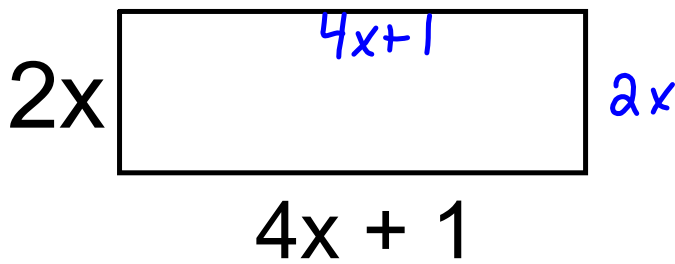
$$\boxed{(-3)x^2} \boxed{(-7)x^2} \boxed{+ 5x} \boxed{+ 7x} \boxed{- 3 - 2}$$

$$-10x^2 + 12x - 5$$

C.  $3x(2x - 3)$

$$6x^2 - 9x$$

$$(2x - 3) 3x$$



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↙ Add up sides!

Write an expression for the perimeter.

$$P = S_1 + S_2 + S_3 + S_4$$

$$12x + 2$$

Write an expression for the area.



$$A = bh$$

$$2x(4x + 1)$$

$$8x^2 + 2x$$

BZOMAS

$x = 2$  find the area

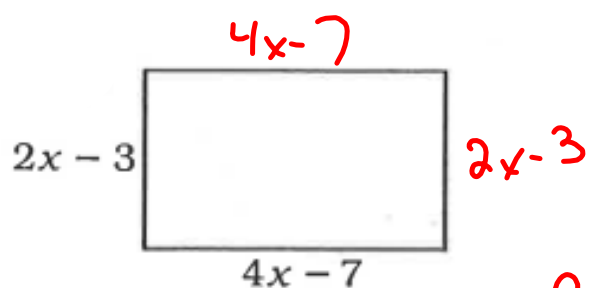
$$8(2)^2 + 2(2)$$

$$8(4) + 4$$

$$32 + 4$$

$$36$$

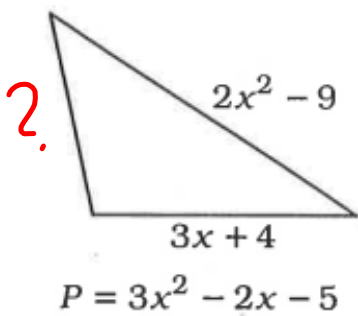
Find the perimeter...



$$P = S_1 + S_2 + S_3 + S_4$$

$$12x - 20$$

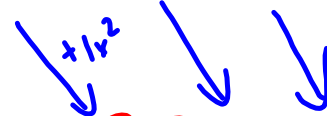
Find the missing side...



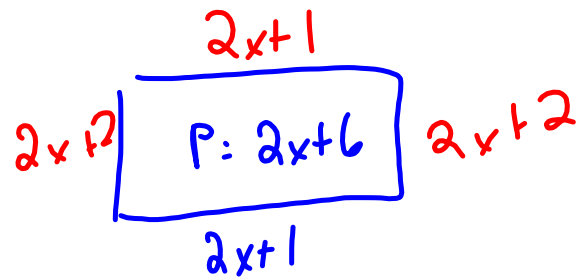
$$\underline{\quad} + 3 + 2 = 12$$

Have 2 sides

$$2x^2 + 3x - 5$$

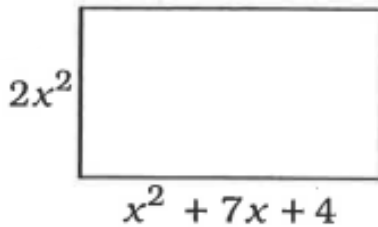


$$\underline{1x^2 - 5x} + 2x^2 - 9 + 3x + 4 = 3x^2 - 2x - 5$$



$P = 8x + 6$  find the unknown sides

Find the area...



$$\begin{aligned}
 A &= bh \\
 &= 2x^2(x^2 + 7x + 4) \\
 &= 2x^4 + 14x^3 + 8x^2
 \end{aligned}$$

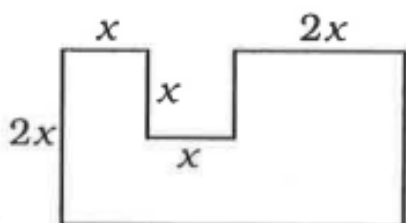
BEOMAS

Find the area if  $x = 2$

$$\begin{aligned}
 &2x^4 + 14x^3 + 8x^2 \\
 &2(2)^4 + 14(2)^3 + 8(2)^2 \\
 &2(16) + 14(8) + 8(4) \\
 &32 + 112 + 32
 \end{aligned}$$

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Find the area...



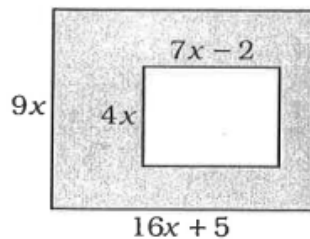
$$\begin{aligned} \text{Area \#1 } A &= bh \\ &= (x)(x) \\ &= x^2 \end{aligned}$$

$$\begin{aligned} \text{Area \#2 } A &= bh \\ &= x(2x) \\ &= 2x^2 \end{aligned}$$

$$\begin{aligned} \text{Area \#3 } A &= bh \\ &= (1x)(4x) \\ &= 4x^2 \end{aligned}$$

$$\begin{aligned} A_1 + A_2 + A_3 \\ x^2 + 2x^2 + 4x^2 \\ 7x^2 \end{aligned}$$

Find the area of the shaded region...



[Area of Larger] - [Area of smaller]

$$[9x(16x+5)] - [4x(7x-2)]$$

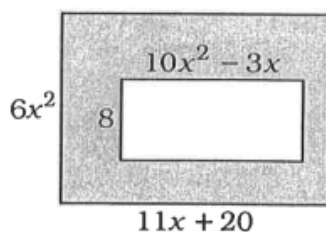
$$(144x^2 + 45x) - (28x^2 - 8x)$$

$$144x^2 + 45x - 28x^2 + 8x$$

$$144x^2 - 28x^2 + 45x + 8x$$

$$116x^2 + 53x$$

Find the area of the shaded region...



$$[\text{Area of larger}] - [\text{Area of smaller}]$$

$$[6x^2(11x+20)] - [8(10x^2-3x)]$$

$$[66x^3 + 120x^2] - [80x^2 - 24x]$$

$$66x^3 + 120x^2 - 80x^2 + 24x$$

$$66x^3 + 40x^2 + 24x$$