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Webassign Problems about multiplying polynomials

Ex: $(4x-y)^3 = (4x-y)^2(4x-y)$

Find $(4x-y)(4x-y)$ then take that and multiply it by $(4x-y)$

or we can use the form for this question

We plug into the formula having $a=4x$ and $b=y$

$$(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$$

Formulas

for
Binomials

$$(a-b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$$

cubed

So

$$\underset{a}{(4x)} - \underset{b}{y} \text{ } ^3 = (4x)^3 - 3(4x)^2(y) + 3(4x)(y)^2 - (y)^3$$

$$= 64x^3 - 3(16x^2)(y) + 3(4x)(y^2) - (y^3)$$

$$= 64x^3 - 48x^2y + 12xy^2 - y^3$$

We can take away the parentheses b/c they don't matter in this question

Ex:

$$[(x+1) - y]^2 = [x+1-y]^2$$

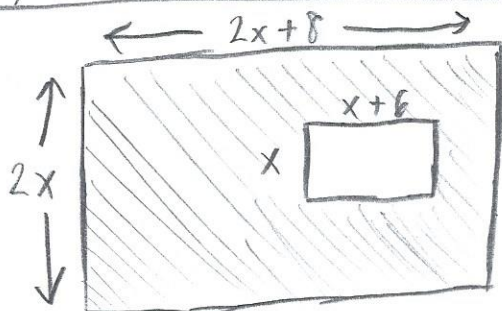
$$= [x+1-y][x+1-y]$$

$$\begin{array}{rccccccc} x^2 & + & x & - & xy & & \\ & + & x & & & + & 1 & - & y \\ & & & - & xy & & & - & y & + & y^2 \end{array}$$

$$= x^2 + 2x - 2xy + 1 - 2y + y^2$$

We assign Questions about Area p-3 Q14

Ex:



Find the area of the shaded region.

So find area of the whole shape and subtract the area of the not shaded shape.

$$A_{\text{Total}} - A_{\text{white}} =$$

$$(2x)(2x+8) - x(x+6) =$$

$$= 4x^2 + 16x - x^2 - 6x$$

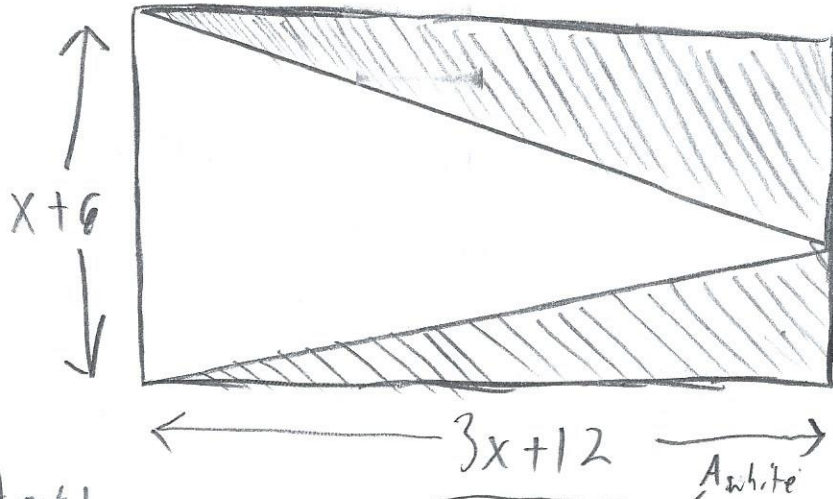
$$= 3x^2 + 10x$$

A_{shaded}

$$A_{\text{Total}} - A_{\text{white}} = A_{\text{shaded}}$$

$$A_{\square} = L \cdot W \quad A_{\triangle} = \frac{b \cdot h}{2}$$

Ex:



$$\frac{A_{\text{total}}}{(x+6)(3x+12)} - \frac{A_{\text{white}}}{\frac{(x+6)(3x+12)}{2}} =$$

Notice that
our A_{white} is just $\frac{A_{\text{total}}}{2}$ so then
our answer is just $\frac{A_{\text{total}}}{2}$ since we took away
half of the number.

$$= \frac{(x+6)(3x+12)}{2} = \frac{3x^2 + 30x + 72}{2}$$

$$= \frac{3}{2}x^2 + \frac{30}{2}x + \frac{72}{2}$$

$$= \frac{3}{2}x^2 + 15x + 36$$

← This is the correct answer but we assign does not like fractions so we need to divide each coefficient by 2.