Warm Up February 26, 2019

1.) Your starting salary at a new company is $34,000 and it increases by 2.5% each year.

A. Write an exponential growth function to represent this situation.

$y = a(1+r)^t$

a = initial value

$y = 34000(1+.025)^t$

$y = 34000(1.025)^t$

B. What will you salary be in 5 years? Round your answer to the nearest dollar.

$y = 34000(1.025)^5$

$y = \$38,468$

2.) Simplify: $(4x^2)(3x^3)^4 - 6x^{14}$

$(4x^2)(81x^{12}) - 6x^{14}$

$324x^{14} - 6x^{14}$

$318x^{14}$

# Rectangle

$A = LW$

$P = 2L + 2W$

$W = 5x + 2$

$L = 3x + 4$

$(3x+4)(5x+2)$

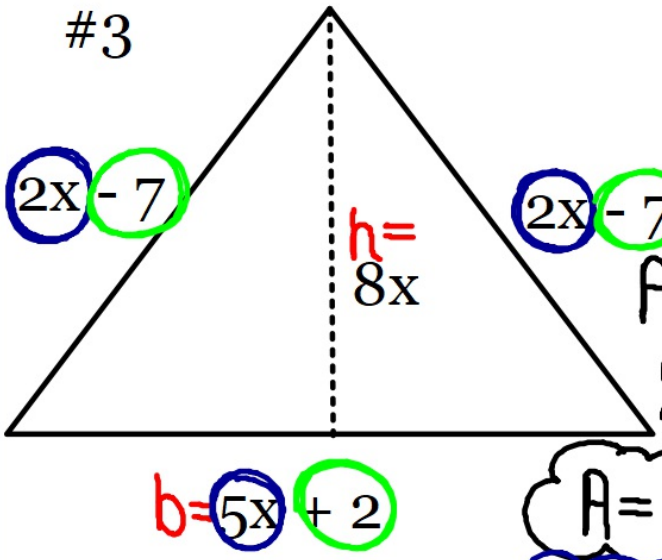
$A = 15x^2 + 26x + 8$

| | $5x$ | $+2$ |
|---|---|---|
| $3x$ | $15x^2$ | $6x$ |
| $+4$ | $20x$ | $8$ |

$P = 5x + 2 + 3x + 4 + 5x + 2 + 3x + 4$

$P = 16x + 12$

#3




Triangle

A = (1/2) bh

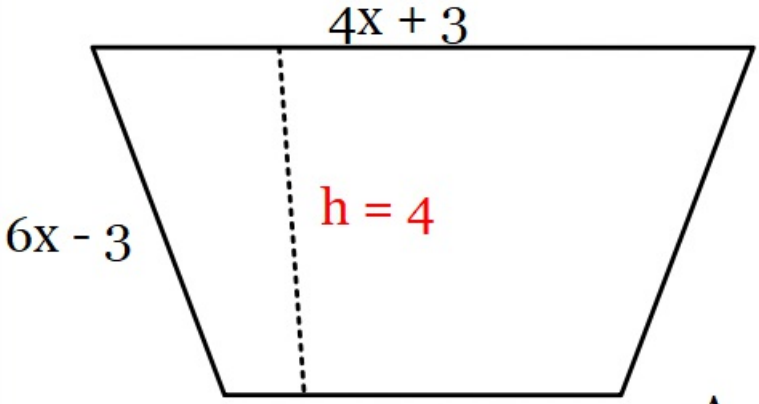
P = Sum of all 3 sides

$A=\frac{1}{2}(5x+2)(8x)$

$A=\frac{1}{2}(40x^2+16x)$

$A=20x^2+8x$

$P=9x-12$




Trapezoid

$A = (1/2)h(b_1 + b_2)$

P = Sum of all 4 sides

$A=\frac{1}{2}(3x+4)(4x+3+2x-5)$

$A=\frac{1}{2}(3x+4)(6x-2)$

$A=\frac{1}{2}(18x^2+18x-8)$

$A=9x^2+9x-4$

| | 3x | +4 |
|---|---|---|
| 6x | $18x^2$ | 24x |
| −2 | −6x | −8 |

Find the area of the shaded region.