Expressions Review

November 24, 2016 11:37 AM

Solve by Collecting Like Terms:

a) $(6x^2 + 10x) + (4x^2 - 2x)$

$10x^2 + 8x$

b) $(-3y^2 - 4y - 5) + (7y^2 - 3y - 2)$

$-3y^2 + 7y^2 - 4y - 3y - 5 - 2$

$4y^2 - 7y - 7$

c) $(10x^2 - x + 8) + (6x - x^2 + 3)$

$9x^2 + 5x + 11$

d) $(15m^2 - 12e + f) + (7f - 2e)$

$15m^2 - 14e + 8f$

e) $(-6x^2 - 5x - 4) + (-4x^2 - 5x - 6)$

$-10x^2 - 10x - 10$

Simplify by $\boxed{\text{Adding the Opposite}}$

a) $(3x + 10) + (-7x + 3)$

$-4x + 13$

b) $(-4y - 5) + (-2y + 4)$

$-6y - 9$

c) $(m^2 + \cancel{m}) + (+4m^2 \cancel{+ m})$

$5m^2$

d) $(8y^2 - 2y + 5) + (+2y^2 + 2y + 4)$

$10y^2 - 4y + 9$

Simplify using distribution:

a) $4(3x + 2)$

$12x + 8$

b) $-2(10y-2)$

$-20y+4$

c) $2m(3m-1)$

$6m^2-2m$

d) $\frac{1}{2}x(12x-8)$

$\frac{1}{2}(12)(x)(x) - \frac{1}{2}(8)x$

$\frac{12}{2} \quad 6x-4x$

e) $\frac{3}{4}x(12x+20)$

$\frac{3}{4}(12)xx + \frac{3}{4}(20)x$

$\frac{36}{4}x^2 + \frac{60}{4}x$

$9x^2+15x$

Solve by division:

a) $\frac{14x^2-18x}{2x} = \frac{14xx}{2x} - \frac{18x}{2x}$

$7x-9$

b) $\frac{33y^2-21y}{}$ $\quad \frac{33yy}{} - \frac{21y}{}$

b) $\dfrac{33y^2 - 21y}{3y}$ $\quad \dfrac{\cancel{33}\cancel{y}y}{\cancel{3}\cancel{y}} - \dfrac{\cancel{21}\cancel{y}}{\cancel{3}\cancel{y}}$

$11y - 7$

Evaluate if $x = 5$ and $y = -2$

a) $3x + 2y$

$3(5) + 2(-2)$

$15 - 4$

11

b) $x^2 - 3y$

$5^2 - 3(-2)$

$25 + 6$

31

if $x = -3$ and $y = 11$

a) $4x + 2y^2$

$4(-3) + 2(11^2)$

$-12 + 2(121)$

$-12 + 242$

230

b) $x^2 + y^2 + x + y$

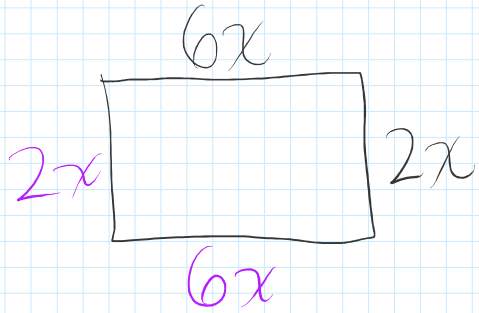
$(-3)^2 + 11^2 + -3 + 11$

$9 + 121 - 3 + 11$

138

Find the Perimeter and Area:

a)



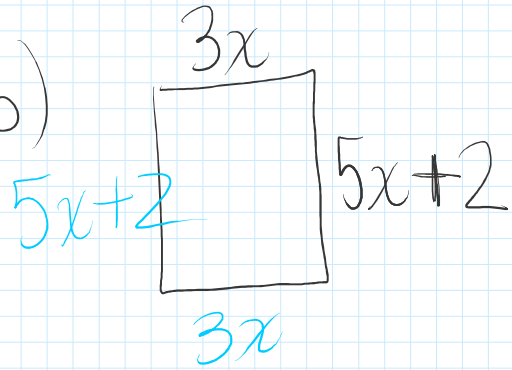
$P = 6x + 2x + 6x + 2x$

$P = 16x$

$A = LW = (6x)(2x)$

$A = 12x^2$

b)



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

$P = 16x + 4$

$A = 3x(5x+2)$

$A = 15x^2 + 6x$