October 23, 2015

#5) $g(x) = 2x - 5$

$h(x) = 4x + 5$

$g(3) - h(3) = (g-h)(3)$

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

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

$6 - 5 - (17)$

$6 - 5 - 17$

$1 - 17$

-16

Oct 23-10:01 AM

#13) $f(x) = 2x^3 - 5x^2$

$g(x) = 2x - 1$

$(f \cdot g)(x) = (2x^3 - 5x^2)(2x - 1)$

$= 4x^4 - 2x^3 - 10x^3 - 5x^2$

$= 4x^4 - 12x^3 - 5x^2$

Oct 23-10:10 AM

#22) $g(a) = 2a + 2$

$h(a) = -2a - 5$

$(g \circ h)(-4 + a) = g(h(x))$

$= 2(h(x)) + 2$

$= 2(-2a - 5) + 2$

$= 2(-2(-4 + a) - 5) + 2$

$= 2(8 + (-2a) - 5) + 2$

$= 2(3 - 2a) + 2$

$= 6 - 4a + 2$

$= 8 - 4a$

Oct 23-10:12 AM

Finding Equations to lines.

① From two ordered pairs

② From a ordered pair & a slope

$(-5, 8)$; $m = -\frac{1}{2}$

$y = mx + b$

① use $y = mx + b$

② use $y - y_1 = m(x - x_1)$

$8 = -\frac{1}{2}(-5) + b$

$8 = \frac{5}{2} + b$

$\frac{8}{1} - \frac{5}{2} = b$

$\frac{16}{2} - \frac{5}{2} = b$

$-\frac{39}{2} = b$

$y = -\frac{1}{2}x - \frac{39}{2}$

Convert to Standard form

$ax + by = c$

a, b, & c are integers, not fractions!

$2y = -1x - 39$

$+1x \quad +1x$

$1x + 2y = -39$

We always want the coefficient of x to be positive.

Oct 23-10:24 AM

$-5x + 3y = 8$

not positive!

$\frac{-5x}{-1} + \frac{3y}{-1} = \frac{8}{-1}$

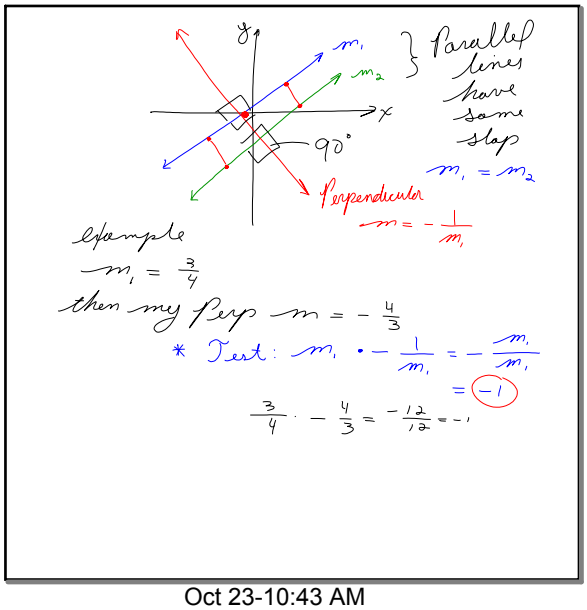
$5x - 3y = -8$

Oct 23-10:37 AM

③ From ordered pair & an equation.

$(-3, 7)$; Parallel to $5x - 3y = 8$

Oct 23-10:40 AM



Oct 23-10:43 AM