

Review: Combine 'like' terms

a. $\frac{5x-3+9x+10}{14x+7}$

b. $\frac{-9+5h-3+3h^2-8h}{3h^2-3h-12}$
 $\frac{-3h+3h^2-12}{3h^2-3h-12}$

c. $(4g+2)-(9g+12)$
 $4g+2-9g-12$
 $-5g-10$

d. $(m^2+m)-(5m-3)$
 $m^2+m-5m+3$
 m^2-4m+3

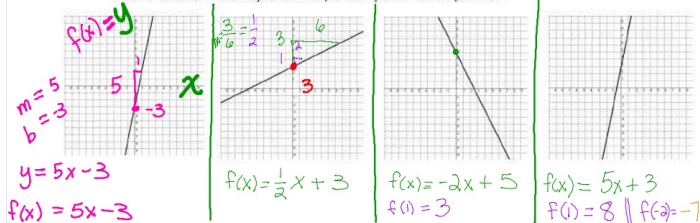
e. $3y(6y^2+y-3)$
 $18y^3+3y^2-9y$

$\frac{3y \cdot 6y^2}{18y^3}$
 $\frac{3y \cdot y}{3y^2}$

f. $(2k-1)(k+5)$
 $2k^2+10k-k-5$
 $2k^2+9k-5$

1. Write functions for each. Use $f(x) = mx + b$ (function notation for $y = mx + b$)

FIRST: determine the slope, then the y-intercept to write the function



2. You have 12 toys to begin with, and you donate 3 per day.
Write a function:
 $T(d) = -3d + 12$

3. There are 50 ghouls in the cemetery, and 3 more join the party every week.
Write a function:
 $G(w) = 3w + 50$

4. You have 48 homework problems and you complete 10 problems each hour.
Write a function:
 $P(h) = -10h + 48$

For the below questions, use these functions: $f(x) = 5x - 3$ $g(x) = -4x + 7$ $h(x) = x^2 - 4$

5. $f(x) + g(x)$
 $5x - 3 + (-4x + 7)$
 $x + 4$

6. $f(x) - g(x)$
 $5x - 3 - (-4x + 7)$
 $5x - 3 + 4x - 7$
 $9x - 10$

7. $h(x) - f(x)$
 $x^2 - 4 - (5x - 3)$
 $x^2 - 4 - 5x + 3$
 $x^2 - 5x - 1$

For the below questions, use these functions: $f(x) = 2$ $g(x) = x + 3$ $h(x) = x + 5$

8. $f(x) \cdot g(x)$
 $2(x + 3)$
 $2x + 6$

9. $g(x) \cdot h(x)$
 $(x + 3)(x + 5)$
 $x^2 + 5x + 3x + 15$
 $x^2 + 8x + 15$

10. $\frac{f(x)}{h(x)}$
 $\frac{2}{x + 5}$

For the problems below, use these functions: $f(x) = 8x + 3$ $g(x) = 5x - 1$ $h(x) = x^2 + 5$

11. $f(x) + g(x)$
 $8x + 3 + 5x - 1$
 $13x + 2$

12. $5[f(x)]$
 $5(8x + 3)$
 $40x + 15$

13. $f(x) - g(x)$
 $8x + 3 - (5x - 1)$
 $8x + 3 - 5x + 1$
 $3x + 4$

14. $h(x) - f(x) + g(x)$
 $x^2 + 5 - (8x + 3) + 5x - 1$
 $x^2 + 5 - 8x - 3 + 5x - 1$
 $x^2 - 3x + 1$

15. $f(x) \cdot g(x)$
 $(8x + 3)(5x - 1)$
 $40x^2 - 8x + 15x - 3$
 $40x^2 + 7x - 3$

16. $f(x) \cdot h(x)$
 $(8x + 3)(x^2 + 5)$
 $8x^3 + 40x + 3x^2 + 15$
 $8x^3 + 3x^2 + 40x + 15$