

Distribute or factor each expression.

**Factoring Fridays**

1.  $x(x + 5)$

Factor each expression

6.  $x^2 + 3x$

2.  $(x + 1)(x + 2)$

7.  $x^2 + 6x + 5$

3.  $(x - 2)(x + 3)$

8.  $x^2 + 3x + 2$

4.  $(x + 1)(x + 4)$

9.  $x^2 + 5x + 6$

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

10.  $x^2 + 7x + 10$

11. Given  $f(x) = 3x + 1$ . Simplify  $f(2)$ .

12. Find  $g(x) = 2x - 3$  for  $x = 4$ .

13. Given  $h(x) = \frac{x+3}{11}$ . Evaluate the expression  $h(8)$ .

14. For a circle,  $A = \pi r^2$ . Find the area,  $A$ , for  $r = 3$  in terms of  $\pi$ .

15. For a square,  $A = s^2$ . Find the area of a square,  $A$ , with  $s = 1.5$

16. For a rectangle,  $A = l \times w$ . Calculate  $A$  when  $l = 4$  and  $w = 3.5$

Solve for the value of  $x$ .

17.  $6x = 12$

18.  $2x = 4\pi$

19.  $3(2x - 4) = 3(x + 2) + 3$

20.  $2x - 5 = \frac{1}{3}(12 - 3x)$

21.  $x = \frac{1}{3}x + 6$

Combine like terms

22.  $x^2 + 2x - 6 - 2x^2 - x + 14$

23.  $5(a^2 - 2a + 3) - 2(2a^2 - 5a - 4)$

24.  $x^2 + 2xy - y^2 + 3x^2 - xy + 4y^2$

What is the slope and  $y$ -intercept of each equation?

25.  $y = -2x - 3.5$

26.  $2y = 8x + 4$

27.  $9x - 3y = 6$

Apply the distributive property

28.  $x(x + 5)$

29.  $3x(x^2 - 2x + 11)$

30.  $x(x^2 - 4x + 5) + 21$

31.  $(x + 1)(x + 3)$

32.  $(x + 2)(x + 3)$

33.  $(x + 1)(x + 4)$