Algebra Review   **Name** _____
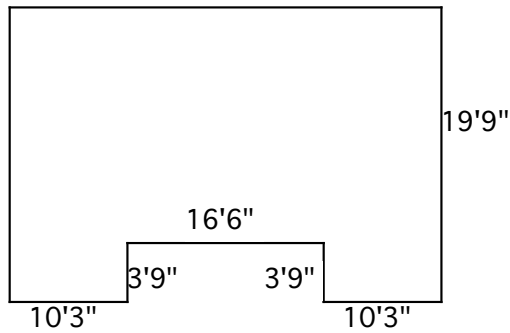
1.   A stack of 50 pennies stands 3 inches high. To the nearest foot, how high would a stack of 1 million pennies reach?

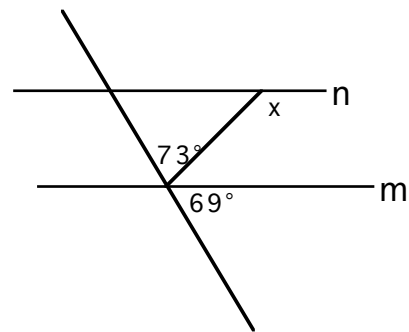2.   Find the perimeter (P) and area (A) of the following rectangular room.

P = _____

A = _____

3.   Find the solution for x over the set of integers: $x + 5 = -31 - 2x$

(a) −36   (b) −18   (c) $-\dfrac{26}{3}$ (d) −12   (e) None of these

4.   Find the missing angle x in the drawing below.
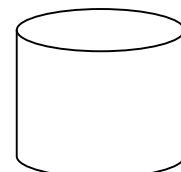
Assume lines n and m are parallel.

(a) 38°   (b) 218°   (c) 69°
(d) 142°   (e) None of these

5.   If 1 inch = 2.54 cm, convert 69 inches to centimeters. Round to the nearest centimeter.

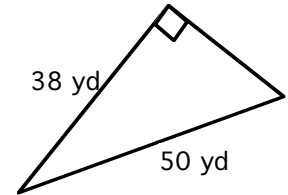(a) 27   (b) 72   (c) 175   (d) 326   (e) None of these

6.   Find the volume of a right circular cylinder with radius 4 feet and height 6 feet.
        Use the π key in your calculations. Round to the nearest cubic foot.

(a) 151   (b) 25   (c) 302   (d) 452
(e) None of these

7. Find the area of the given triangle. Round to the nearest square yard.

(a) 120   (b) 608   (c) 950   (d) 1,216

(e) 1,900

38 yd

50 yd

8. The formula for converting degrees Celsius (C) to degrees Fahrenheit (F) is

$F = \dfrac{9}{5}C + 32$. Celicia reads that the temperature is 85°F in Sarasota, Florida. What is the Celsius temperature to the nearest degree?

(a) 15   (b) 29   (c) 79   (d) 185   (e) None of these

9. Evaluate $(2a - 4b)^2$ for $a = -4$ and $b = 3$.

(a) 400   (b) –20   (c) 16   (d) 208   (e) None of these

10. Solve the equation for x: $5 + 3(5x - 3) = 4(3x + 1)$

(a) $\dfrac{8}{3}$ (b) 1   (c) $\dfrac{2}{3}$ (d) $\dfrac{5}{3}$ (e) None of these

11. If $(x + y)(x - y) = 20$ and $x + y = 10$, then $x \cdot y = ?$
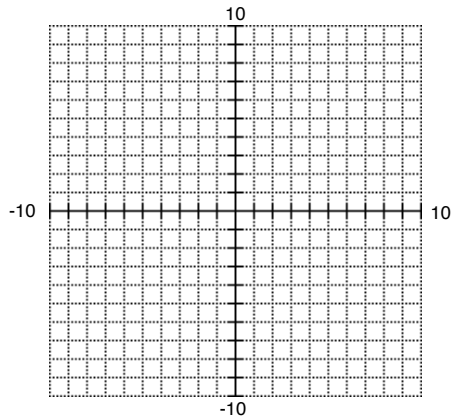
12. Factor completely: $3x^3 - 12x$

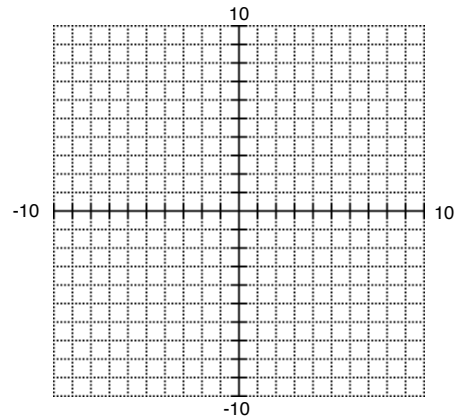13. Solve for x: $2(x + 3)(x - 4)(3x - 1) = 0$

14. Jeremiah scores a 73 and a 79 on two tests. If the final exam counts as two tests, what score must he make on the final exam to bring his average up to 80 (with no rounding)?
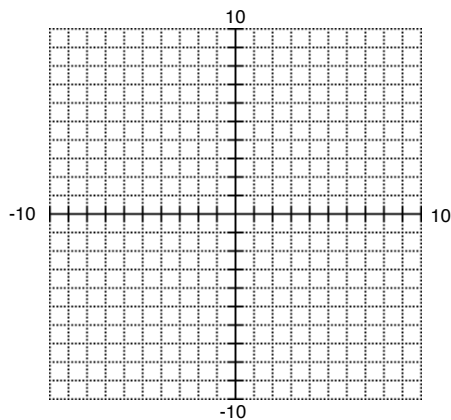
Graph.

15. $y = -\dfrac{2}{3}x + 4$

16. $3x - 2y = 6$

17. $y = (x + 2)^2 - 4$

Simplify.

18. $\left(6a^2b\right)\left(-3a^2b^5\right)^2$

19. $\dfrac{3}{2x} + \dfrac{4}{3x} - \dfrac{5}{4x}$

20. $\left(3x - 5\right)^2$

Live and learn! Do your best! Rise to the challenge!