

Algebra On Demand – Assessment 6

Answer the any of the following on a separate sheet of paper. Clearly write the question/skill number for each.

Skill 1 – Integer Operations

a. $-7 + (14) =$

b. $(-9)(6) =$

c. $-14 - (-10) =$

d. $-110 \div (10) =$

Skill 2 – Simplify

a. $6 - 3 \times 8 + 10 =$

b. $-4(6-1) + 3(3-5) - 4 \times 2 =$

Skill 3 – Combine like terms

a. $-4x + 7 - 4x - 12$

b. $-2m + 8 - 10m^2 + m + 4m^2 - 3$

Skill 4 – Distribute

a. $6(4 - 2k)$

b. $-5c(3c - 4)$

Skill 5 – Solve

a. $x + 6 = -8$

b. $-6y = 42$

c. $\frac{3}{5}k = 6$

Skill 6 – Solve

a. $-2a - 8 = 24$

b. $-\frac{3}{5}p + 7 = -11$

Skill 7 – Solve

a. $2t - 18 = 5t - 27$

b. $-3(m-1) + 6(m+2) = 30$

Skill 8 – Plot and label the following points:

a. $(-4, -6)$

b. $(-1, 5)$

c. $(5, 2)$

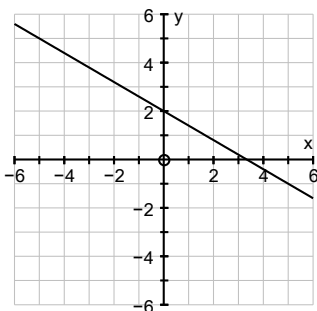
d. $(1, -3)$

Skill 9 – Graph the following lines:

a. $y = -2x + 4$

b. $y = \frac{5}{3}x - 3$

Skill 10 – Write the equation of the line:

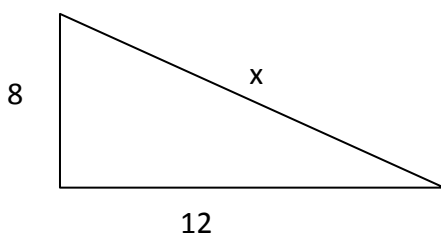


Skill 11 – Graph the following lines

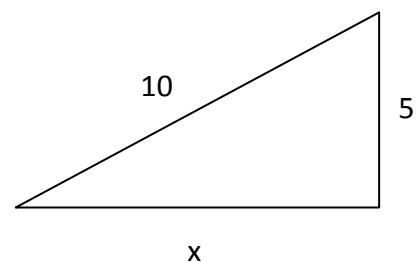
a. $3x - 6y = 12$

b. $-2x + 7y = -14$

Skill 12 – Pythagorean Theorem: solve for x:



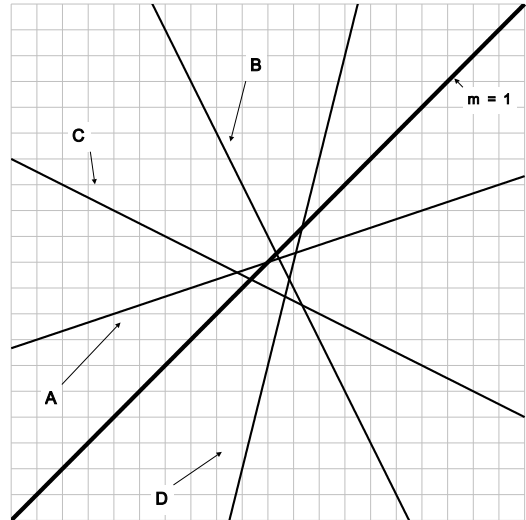
Skill 13 – Pythagorean Theorem: solve for x:



Skill 14 – Identifying slopes:

Which of the lines could have:

- a. $m = \frac{1}{3}$
 b. $m = -2$
 c. $m = 4$
 d. $m = -\frac{1}{2}$

**Skill 15 - Give the slope and y-intercept of each of the following**

a. $y = -\frac{2}{5}x + 7$

b. $8x - 6y = -24$

Skill 16 – Equation given two points

Find the equation of the line that passes through the points (2,1) and (-2,3).

Skill 17 – Equation given the slope and a point

Write the equation of the line with a slope of -2 that passes through (-3, 2).

Skill 18 – Equation of Horizontal and Vertical Lines

Write the equation of:

- a. The vertical line through (-7.5, -4)
 b. The horizontal line through (5, 10)

Skill 19 – Slope of Horizontal and Vertical Lines

Write the slope of the following lines:

- a. $y = -3$
 b. $x = \frac{1}{2}$

Skill 20 – Convert to Standard FormConvert $y = \frac{2}{5}x - 2$ to standard form.**Skill 21 – Factoring out a GCF**

Factor

- a. $7x - 21$
 b. $3m^3 - 6m^2 + 9m$

Skill 22 - FOIL

- a. $(x-4)(x+10)$
 b. $(2x+1)(5x-2)$

Skill 23 – System of Equations

Solve $y = 4x - 5$
 $y = -3x + 2$

Skill 24 – Parallel and Perpendicular Lines

Write the equation of the line:

- a. Parallel to $2x - 6y = 53$ that passes through (0, -1).
 b. Perpendicular to $2x - 5y = 8$ that passes through (5, 0)

Skill 25 – Factoring Trinomials

Factor:

- a. $x^2 + 8x + 12$
 b. $x^2 + 10x - 39$