

Test 1-1 Geometry PreAP Answer Key

1a) $2a^2 + 3a + 6ab$

1b) $19x^2 + 10xz - 3z^2$

2a) -27

2b) 115

2c) $x = -5$

Handwritten work for problem 2c:

$$\begin{aligned} \textcircled{1} \quad \frac{1}{2}x + 5 &= \frac{5}{2}x + 15 && \textcircled{1} \text{ Given} \\ \textcircled{2} \quad \frac{-1}{2}x &= \frac{-1}{2}x + 10 && \textcircled{2} \text{ Subtraction POE} \\ \textcircled{3} \quad -10 &= 2x && \textcircled{3} \text{ Subtraction POE} \\ \textcircled{4} \quad -5 &= x && \textcircled{4} \text{ Division POE} \end{aligned}$$

2d) $x = 4$

Handwritten work for problem 2d:

$$\begin{aligned} \textcircled{1} \quad 5x - 2(x - 3) &= \frac{2}{3}(16 - 2x) && \text{Given} \\ 5x - 2x + 6 &= 12 - \frac{2}{3}x && \text{Distribute Property} \\ 3x + 6 &= 12 - \frac{2}{3}x && \text{Combine like terms} \\ \frac{12}{3}x + 6 &= 12 && \text{Addition POE} \\ \frac{1}{2}x &= 6 && \text{Subtraction POE} \\ x &= \frac{12}{1} && \text{Division POE} \end{aligned}$$

3a) $3\sqrt{10}$

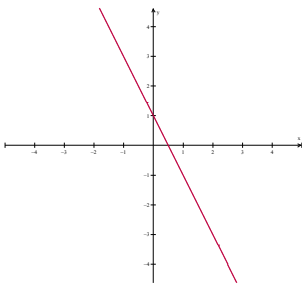
3b) $\sqrt{13}$

4a) $3\sqrt{2}$

4b) $2\sqrt{7}$

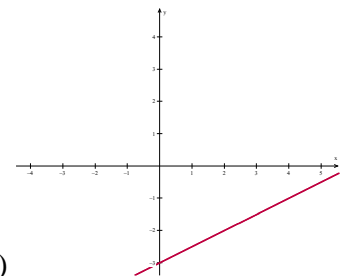
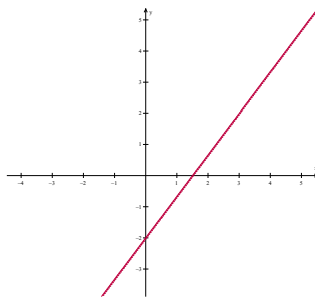
4c) $9\sqrt{3}$

4d) $-30\sqrt{3}$



5a)

5b)



5c)

6a) Perpendicular

6b) Intersecting

6c) Coinciding

6d) Intersecting

7a) $(2, 3)$

7b) $(2, 0)$

8)

c) Find the errors and fix the problem

$$\begin{cases} 2y = 3x + 2 \\ 2x - 4y = 20 \end{cases}$$

$$\frac{2y}{2} = \frac{3x}{2} - \frac{4}{2}$$

$$y = \frac{3}{2}x + 1 \quad \text{Substitute into } 2x - 4y = 20$$

$$2x - 4\left(\frac{2}{3}x + 1\right) = 20$$

$$2x - 6x + 4 = 20$$

$$-4x = 16$$

$$x = -4 \quad \text{Substitute into } y = \frac{3}{2}x + 1$$

$$y = \frac{3}{2}(-4) + 1$$

$$y = -6 + 1$$

$$y = -5$$

$$(-4, -5)$$

error

error

error

correct solution: $(-6, -8)$

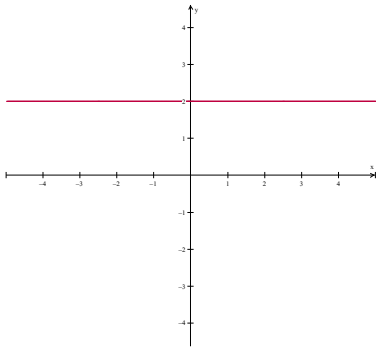
9a) Linear

9b) Quadratic

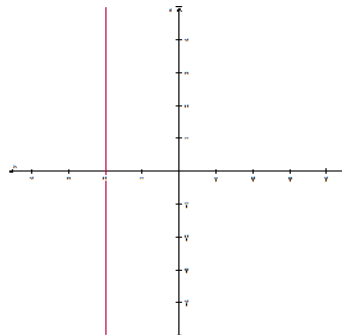
10a) $r = -1, r = -3$

10b) $t = 6, t = 7$

10c) $d = \pm 3$



11a)



11b)

12a) $(1, -1/2)$

12b) $(3, 4)$

13a) $\sqrt{157}, \approx 12.530$

13b) $(0, \pm 5)$