

1. The side length of a square is $4x^3y^2z^4$ units, what is the area of the square? 4/29

2. Solve: $(4x^2 - 2x + 8) \cdot (x^2 + 3x + 2) = 3x^2 - 5x + 10$

3. A group of 3 children and 2 adults pay a total of \$120 to take a karate class. A group of 5 children and 1 adult take the same karate class for \$95. What is the total cost for 1 child and 1 adult to take the karate class?

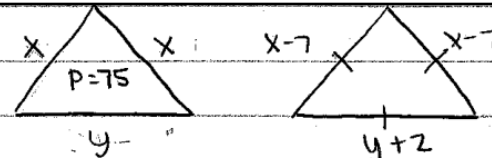
Handwritten work for problem 3:

$$\begin{aligned} 3c + 2a &= 120 \\ 5c + a &= 95 \\ \underline{-5c} & \quad \underline{-5c} \\ a &= -5c + 95 \end{aligned}$$

$$\begin{aligned} 3c + 2(-5c + 95) &= 120 \\ 3c - 10c + 190 &= 120 \\ -7c &= -70 \\ c &= 10 \end{aligned}$$

$$\begin{aligned} 5(10) + a &= 95 \\ 50 + a &= 95 \\ a &= 45 \end{aligned}$$

\$55

1.  (C)

$$\begin{aligned} 2x + y &= 75 \\ x - 7 &= y + 2 \\ \rightarrow x &= y + 9 \end{aligned}$$

$$\begin{aligned} 2(y + 9) + y &= 75 \\ 2y + 18 + y &= 75 \\ 3y + 18 &= 75 \\ 3y &= 57 \\ y &= 19 \end{aligned}$$

2.

	%	Amt	
Mix A	10	x	$10x + 90(50) = 50(x + 50)$
Mix B	90	50	$10x + 4500 = 50x + 2500$
Total =	50	x + 50	$2000 = 40x$
			$x = 50$ (D)

3.

	%	Amt	
Mix A	10	x	$10x + 4(9) = 6(x + 9)$
Mix B	4	9	$10x + 36 = 6x + 54$
Total	6	x + 9	$4x = 18$
			$x = 4.5$ (A)

4.

	%	Amt	
Mix A	7	x	$7x + 17(4) = 11(x+4)$
Mix B	17	4	$7x + 68 = 11x + 44$
Total	11	x+4	$24 = 4x$
			$x = 6$ (C)

5.

$$\begin{aligned} d + q &= 19 \quad -10 \\ 10d + 25q &= 370 \\ \hline -10d - 10q &= -190 \\ \hline 15q &= 180 \\ q &= 12 \end{aligned}$$

(A)

6.

$$\begin{aligned} W + L &= 40 \\ W &= L + 18 \end{aligned}$$

$$\begin{aligned} L + 18 + L &= 40 \\ 2L + 18 &= 40 \\ 2L &= 22 \\ L &= 11 \end{aligned}$$

$$\begin{aligned} W + 11 &= 40 \\ W &= 29 \end{aligned}$$

(C)

7.

$$2x - y > 4$$

$$\begin{aligned} -y &> -2x + 4 \\ \frac{-y}{-1} &\frac{>}{-1} \frac{-2x + 4}{-1} \end{aligned}$$

$$y < 2x - 4$$

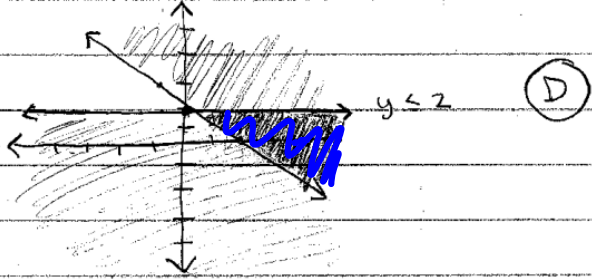
↑ less than ↑ y-int.

(B)

8. $x + y \geq 2$

$y \geq -x + 2$

↑ greater than
↑ y-int



9. $(2x + y = 7) \cdot 4$

$3x - 4y = 5$ $2(3) + y = 7$ (D)

$-8x + 4y = 28$ $6 + y = 7$ $(3, 1)$

$11x = 33$ $y = 1$

$x = 3$

10. $x = 2y - 8$ $4(2y - 8) + y = 13$ $x = 2(5) - 8$

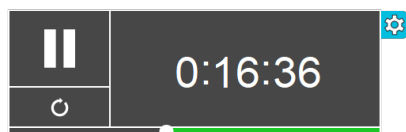
$4x + y = 13$ $8y - 32 + y = 13$ $x = 10 - 8$

$9y = 45$ $x = 2$ (C)

$y = 5$

$(2, 5)$

Complete EOC Questions - Equations and Linear Functions



#8: $f(x) = -2x + 3$

EOC HW - Equations & Linear Functions

1. $8x = -4(x+3)$

$8x = -4x - 12$

$12x = -12$

$x = -1$ (A)

2. $9x^2 - c = d$

$9x^2 = d + c$

$x^2 = \frac{d+c}{9}$

$x = \sqrt{\frac{d+c}{9}} = x = \frac{\sqrt{d+c}}{3}$ (A)

3. $m = -2$

$b = 1$

$y = -2x + 1$ (A)

4. $\frac{520 \cancel{\text{yd}}}{1 \cancel{\text{min}}} \cdot \frac{1 \cancel{\text{min}}}{60 \text{ sec}} \cdot \frac{3 \text{ ft}}{1 \cancel{\text{yd}}} = \frac{1560 \text{ ft}}{60 \text{ sec}} = \frac{26 \text{ ft}}{\text{sec}}$ (B)

5. 1st: $x = 12$ $x + x + 1 = 3(x+2) - 17$

2nd: $x + 1 = 13$ $2x + 1 = 3x + 6 - 17$

3rd: $x + 2 = 14$ $2x + 1 = 3x - 11$

$1 = x - 11$

$+11$ $+11$

$x = 12$

$12 + 13 = 3(14) - 17$
 $25 = 42 - 17$

6. $(10x^{-6}y^4z^8)^{\frac{-1}{4}}$
 $= 10^{-1/4}x^{-6/4}y^{4/4}z^{-8/4}$

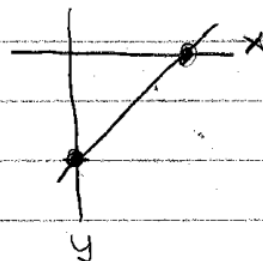
$= \frac{x^{3/2}}{10^{1/4}y^1z^2}$

$= \frac{x^{3/2}}{2yz^2}$ (C)

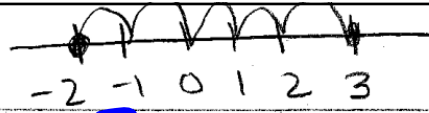
7. $3x - 4y = 28$

x-int: $9\frac{1}{3}$

y-int: -7



(A)


 $3 + 2 = 5$

8. $f(x) = -2x + 3$ $m = -2$ $g(x) = 3x - 14$ $m = 3$ $-2 - 3 = -5$ (B)

$\begin{array}{r} 2 \\ 14 \\ \hline 16 \\ 6 \\ \hline 22 \\ 3 \end{array}$

9. $y = 12x + 3 + 5$ $y = 12x + 8$ $y = 128$ (B)

$x = 10$ classes one time fee $y = 12(10) + 8$ $y = 120 + 8$

10. $y = 35x + 250$ (A)

amt added each month starting amt

11. Range = y-values
-4 to 6
(B)

12. $m = \frac{6-2}{-9-3} = \frac{4}{-12} = -\frac{1}{3}$ $y = mx + b$

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

$2 = -1 + b$ $3\left[\frac{1}{3}x + y = 3\right] = x + 3y = 9$

$3 = b$

13. $3(x+2) = 12 - 2y$ $3x + 2y + b = 12$

$3x + b = 12 - 2y$ $-6 \quad -6$

$+2y$ $+2y$ $3x + 2y = 6$

HW: p. 6