

EOQ Review

1) $8[(14+4)^2 + 5]$
 $8[(18)^2 + 5]$
 $8[324 + 5]$
 $8[329]$
 2632

2) $x + y = 12$ $F, 5$
 $x - y = 2$
 $2x = 14$
 $x = 7$

3) $24t^2 + 48t - 16 = \frac{24t^2}{-8} + \frac{48t}{-8} + \frac{-16}{-8}$
 $-3t^2 - 6t + 2$

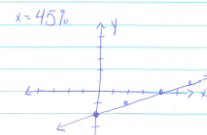
4) $3x - 4y = 20$
 $-3x$ $-4y$
 $-4y = 8x + 20$
 -4 -4
 $y = 2x - 5$

5) $l = 5.6 + w$ $p = 2l + 2w$
 $35.2 = 2(5.6 + w) + 2w$
 $35.2 = 11.2 + 2w + 2w$
 $35.2 = 11.2 + 4w$
 -11.2 -11.2
 $24 = 4w$
 4 4
 $6 = w$ $l = 11.6 \text{ m}$
 $w = 6 \text{ m}$

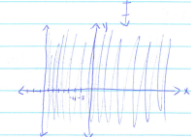
6) $12(x+7) = 144$
 $12x + 84 = 144$
 -84 -84
 $12x = 60$
 12 12
 $x = 5$

7) $\frac{13}{of} = \frac{96}{x00}$ $\frac{40.5}{90} \times \frac{x}{100}$
 $\frac{90x}{90} = \frac{4050}{90}$
 $x = 45%$

8) $3x - 6y = 12$
 $-6y = -3x + 12$
 $y = \frac{1}{2}x - 2$



9) $x - 15 = -28$
 $+15$ $+15$
 $x = -13$



10) $y - y_1 = m(x - x_1)$
 $y - (-5) = 4(x - 8)$
 $y + 5 = 4(x - 8) \rightarrow$ Don't Distribute!

11) $2, 2, 3, 4, 5, 6, 7, 8, 8$
 mean: $45 \div 9 = 5$
 median: 5
 mode: 2 and 8
 range: From 2-8 = 6

12) $15x + 6y = 42$
 $6y = -15x + 42$
 $y = -\frac{5}{2}x + 7$ slope: $-\frac{5}{2}$ y-int: 7

13) $15x + 7y = 4$ $15x + 2y = 12$ $5x + 7(2) = 4$
 $5(3x - 6y) = 4$ $-15x - 30y = 30$ $5x + 14 = 4$
 $-9y = 18$ $14 - 14$
 $y = -2$ $5x - 10 = 4$
 $x = 2$

14) $V = \frac{1}{3}bh$ $V = 10(36)$ $V = 300$ $V = 120 \text{ ft}^3$

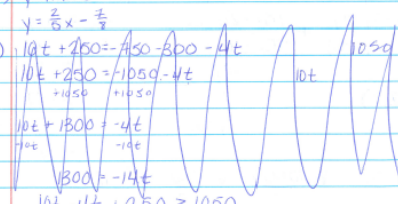
15) $\frac{13}{n} \times \frac{39}{27}$ $\frac{39}{27} \times \frac{x}{45}$
 $\frac{361}{81} = \frac{39}{27}$ $\frac{27x}{27} = \frac{1755}{27}$
 $9 = n$ $x = 65$

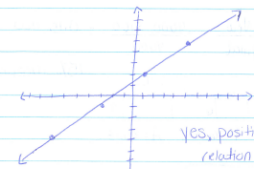
16) $-2.4, \sqrt{7}, -2.3, -\sqrt{2}, 2.6, 200\%$
 $-2.6, 2.646, -2.3, -2.828, 2.6, 2.0$
 $\rightarrow -\sqrt{3}, -2.6, -2.3, 200\%, \sqrt{7}, 2.6$

17) $(w-3) - 5(w+7) = 10(w+3) - (7w+5)$
 $w - 3 - 5w - 35 = 10w + 30 - 7w - 5$
 $-4w - 38 = 3w + 25$
 $-4w$ $+4w$
 $-38 = 7w + 25$
 -25 -25
 $-63 = 7w$
 7 7
 $-9 = w$

18) $y = mx + b$
 $y = \frac{2}{5}x - \frac{7}{5}$

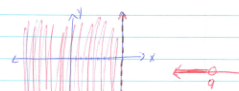
19) $10t + 250 = 1050 - 4t$
 $10t + 250 = 1050 - 4t$
 $+10t$ $+10t$
 $10t + 1800 = -4t$
 $+14t$ $+14t$
 $1800 = -14t$
 $10t - 4t + 250 \geq 1050$
 $6t \geq 800$
 $t \geq 134 \text{ tickets}$



20. 
 YES, positive relation
 $y = x + 1.5$

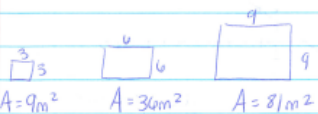
21. $x^2 + 2y + 5 = y - x$
 $-3^2 + 2(4) + 5(5)(4) = (-3)$
 $9 + 8 + 100 + 3$
 120

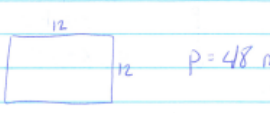
22. $\frac{-7x}{-7} > \frac{-63}{-7}$
 $x < 9$



23. $\frac{y_2 - y_1}{x_2 - x_1} = \frac{-8 - (-4)}{-6 - (-2)} = \frac{-8 + 4}{-6 + 2} = \frac{-4}{-4} = 1$
 a) $y - y_1 = m(x - x_1)$ $y - y_1 = m(x - x_1)$
 $y + 4 = 1(x + 2)$ $y + 8 = 1(x + 6)$
 b) $y + 4 = 1(x + 2)$
 $y + 4 = x + 2$
 -4 -4
 $y = x - 2$
 c) $\frac{y}{-6} = \frac{x - 2}{-1}$ $-1(-x + y = -2)$ $x - y = 2$

24) $\frac{\text{Original} - \text{New}}{\text{Original}} = \frac{9000 - 9100}{9000} = 0.15 \times 100$
 15% decrease

25) 
 $A = 9 \text{ m}^2$ $A = 36 \text{ m}^2$ $A = 81 \text{ m}^2$


 $p = 48 \text{ m}$

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26) $3x = y - 4$ $2y - 6x = 12$
 $3x + 4 = y$ $2(3x + 4) - 6x = 12$
 $6x + 8 - 6x = 12$
 $8 = 12$ // Liar's
 No Solution

27) $5 \leq 3 + 2m$ $-5 \geq 3 + 2m$
 $\frac{2}{2} \leq \frac{2m}{2}$ $\frac{-8}{2} \geq \frac{2m}{2}$
 $1 \leq m$ or $-4 \geq m$

28)

0	1	2	3	4	5
-1	-7	-13	-19	-25	

 $y = -6x - 1$

29) a) $y_1 = y_2$ $(-3, 10)$ $(-5, -4)$
 $x_1 - x_2 = y_1 - y_2$
 $-4 - 10 = -14$ $-14 = -7$
 $-5 - -3 = -2$ $-2 = -2$
 $y = mx + b$ $y = 7x + 31$
 $10 = 7(-3) + b$
 $10 = -21 + b$
 $31 = b$

b) parallel lines $5 = 7(s) + b$ $-16 = b$
 same slope! $5 = 21 + b$ $y = 7x - 16$

30) $P = 2L + 2W$
 $-2L - 2L$
 $\frac{P - 2L = 2W}{2}$
 $\frac{P - 2L}{2} = W$ or $\frac{P}{2} - L = W$

31) $\frac{1}{4}x - \frac{2}{3}x + \frac{1}{6}x = \frac{3}{4}$
 $\frac{3}{12}x - \frac{8}{12}x + \frac{2}{12}x = \frac{9}{4}$
 $-\frac{3}{12}x = \frac{9}{4}$
 $x = -3$

32) Plug put the x's on top instead of the y's.
 $3x - 5 = -20 + 13 = -7 = \frac{7}{-1}$

33) $2x - 7y = -14$
 $-7y = -2x - 14$
 $y = \frac{2}{7}x + 2$

34) $\frac{15}{100} = \frac{200}{100}$ $x = \frac{80}{100}$
 $\frac{100x = 20000}{100}$
 $x = 200$

35) $14 - \frac{1}{5}(x - 10) = \frac{2}{3}(25 + x)$
 $14 - \frac{1}{5}x + \frac{10}{5} = \frac{50}{3} + \frac{2}{3}x$
 $14 - \frac{1}{5}x + 2 = 10 + \frac{2}{3}x$
 $16 - \frac{1}{5}x = 10 + \frac{2}{3}x$
 $6 - \frac{1}{5}x = \frac{2}{3}x$
 $6 = \frac{2}{3}x + \frac{1}{5}x$
 $6(\frac{15}{15}) = x$
 $10 = x$

36) $2x + 12 = 8(x + 3)$
 $12x + 72 = 8x + 24$
 $4x + 72 = 24$
 $4x = -48$
 $x = -12$

37) $3r + 7 < -5$ or $3r < -12$
 $\frac{3r}{3} < \frac{-12}{3}$
 $r < -4$

$3r + 4 < -5$ or $3r < -9$
 $\frac{3r}{3} < \frac{-9}{3}$
 $r < -3$

38) $15 < \frac{5}{9}(12a - 9) < 30$
 $15 < 10a - 5 < 30$
 $+5$ $+5$ $+5$
 $20 < 10a < 35$
 $\frac{20}{10} < \frac{10a}{10} < \frac{35}{10}$
 $2 < a < 3.5$

39) $4 + 3 \leq 5$ $y + 3 \geq -5$
 -3 -3 -3 -3
 $y \leq 2$ $y \geq -8$

40) $2|4v - 5| - 4 > 3$
 $2|4v - 5| > 7$
 $|4v - 5| > \frac{7}{2}$
 $\frac{1}{4}v - 5 > \frac{7}{2}$ $\frac{1}{4}v - 5 < -\frac{7}{2}$
 $+5$ $+5$ $+5$ $+5$
 $\frac{1}{4}(\frac{1}{4}v > \frac{17}{2})$ $\frac{1}{4}(\frac{1}{4}v < \frac{3}{2})$
 $v > 34$ $v < 6$

