

Math 9 Unit 6 Review

1. Solve each of the following equations. Show all steps.

a) $2x - 3 = 9$

b) $3x + 2x = -25$

c) $-22 = 7y - 8$

d) $5m + 25 = -65$

e) $-39 = 25 + 4a$

f) $8q - 42 = -26$

g) $2x + 3.1 = 1.1$

h) $6a - 3a + 2a = 10 - 2 + 7$

i) $2x + 7 = 5x + 13$

j) $3x - 4 = 8 - x$

$$(b) \frac{x+2}{2x-5} = \frac{4}{2}$$

$$(t) \frac{3}{2p+1} - \frac{p+4}{5} = 7$$

$$(o) \frac{x}{2} + \frac{3}{y} = \frac{5}{6}$$

$$(p) \frac{3}{2y+1} = -5$$

$$(m) -38 = 5(2y - 1) + y$$

$$(n) \frac{x}{2} - \frac{1}{2} = \frac{1}{2}$$

$$(k) 2 + 3j = 5j - 24$$

$$(l) 7 + 5(x - 3) = 3(x + 2)$$

2. Solve and graph each of the following inequations.

(a) $3(x - 2) \leq 3$



(b) $18 \geq 10 + 4x$



(c) $4t - 3 \geq -15$



(d) $4 - 2x \geq 8$



(e) $7x - 8 > 4x + 1$



$$(i) 4y - 2 \leq 2y + 8$$



$$(h) 3(s + 6) \leq -9$$



$$(g) 6t - 5 > 2t - 1$$



$$(f) 7t + 7 \leq 10t - 14$$



(l) $5(x + 6) - 3 > 2$



(k) $2(x + 4) \leq 5 - 11$



(j) $4(x - 5) - (x + 1) > 3$



(m) $7 - 3(2x - 5) - x > 1$



3. Find the point of intersection for each pair of equations.

(a) $y = 2x$ and $y = x + 3$

(b) $y = x - 1$ and $y = 3 - x$

(c) $y = x + 3$ and $y = 3 - 2x$

(d) $y = x + 4$ and $y = 3x$

(e) $y = x + 8$ and $y = -3x$

(f) $y = x + 2$ and $y = 2x - 3$

(g) $y = -2x$ and $y = 2x - 2$

4. Two companies rent trucks. Company A charges \$60 for the truck plus \$0.20/km. Company B charges \$0.50/km. At what distance will the cost be the same for both companies?

