M-A2 Week 3

Review 1-2

25.) $c(3-a) - c^2 \qquad a = 4 \qquad c = -1$

$(-1)(3-4) - (-1)^2$

$-1(-1) - (-1)^2$

$-1(-1) - 1$

$1 - 1 = \boxed{0}$

26.) $-(a)^2 + 3((d) - 2(a)) \qquad a = 2 \qquad d = -3$

$-(2)^2 + 3((-3) - 2(2))$

$-(2)^2 + 3((-3) - 4)$

$-(2)^2 + 3(-7)$

$-4 + 3(-7)$

$-4 + (-21) = \boxed{-25}$

$-a^2$

$-(2)^2 \quad (-2)^2$

122y's
Head = 6

1-3 Solving Equations

$PV = nRT$ $\qquad V = \frac{nRT}{P}$

$\frac{PV}{P} = \frac{nRT}{P}$ $\qquad T = \frac{PV}{nR}$

$\frac{PV}{nR} = \frac{nRT}{nR}$

1.) $3m - n = 2m + n$ $\qquad m = 2n$

$-2m \qquad -2m$

$m - n = n$

$+n \quad +n$

$m = \boxed{2n}$

3.) $ax + b = cx + d$ $\qquad x =$

$-cx \qquad -cx$

1st: get all x terms on one side

$ax - cx + b = d$

$-b \quad -b$

$ax - cx = d - b$

$x\frac{(a-c)}{a-c} = \frac{d-b}{a-c}$

$$\boxed{x = \frac{d-b}{a-c}}$$

5.) $\frac{1}{2}r + 3s = 1$

$\frac{1}{2}(r) + 3s = 1$

$-3s \quad -3s$

$2\left(\frac{1}{2}r\right) = (1 - 3s)2$

$r = 2(1-3s)$

$= \boxed{2 - 6s}$

Inverse property

$\left(\frac{1}{2}\right) * \frac{2}{1} = 1$

$r =$

$2\left(\frac{1}{2}r + 3s = 1\right)$

$\frac{2}{2}r + 6s = 2$

$r + 6s = 2$

$-6s \quad -6s$

$\boxed{r = 2 - 6s}$

7.) $\frac{x+k}{j} \times \frac{3}{4}$

$\frac{4(x+k)}{4} = \frac{3j}{4}$

$x + k = \frac{3j}{4}$

$-k \qquad -k$

$\boxed{x = \frac{3j}{4} - k}$

$x =$

$\frac{4(12)}{4(7)} = \frac{x}{28}$

$\frac{48}{28} = \frac{x}{28}$

$\frac{12}{7} \times \frac{x}{28}$

$7x = (12)(28)$

1.) $\frac{V}{\frac{\pi}{3}r^2} = \frac{\frac{\pi}{3}r^2h}{\frac{\pi}{3}r^2}$ $\quad h = \frac{V}{\frac{\pi}{3}r^2}$ $\quad \frac{3}{\pi}(V) = \left(\frac{\pi}{3}r^2h\right)\frac{3}{\pi}$

$h = \frac{3V}{\pi r^2}$ $\quad \frac{\frac{3V}{\pi}}{r^2} = \frac{r^2h}{r^2}$

$$\boxed{h = \frac{3V}{\pi r^2}}$$

3.) $S = LW + WH + LH$
$-LH \qquad -LH$

$S - LH = LW + WH$ $\quad \frac{S-LH}{L+H} = \frac{W(L+H)}{L+H}$

$$\boxed{W = \frac{S-LH}{L+H}}$$

4.) $\frac{4}{9}(x+3) = g$ $\quad x =$

$\frac{4x}{9} + \frac{12}{9} = g$ $\quad \frac{\cancel{9}}{\cancel{4}}\left(\frac{\cancel{4}}{\cancel{9}}(x+3)\right) = (g)\frac{9}{4}$

$x + 3 = \frac{9g}{4}$
$-3 \qquad -3$

$$\boxed{x = \frac{9G}{4} - 3}$$

17.) $30\left(\frac{u}{5} + \frac{u}{10} - \frac{u}{6} = 1\right)$

$\frac{30u}{5} + \frac{30u}{10} - \frac{30u}{6} = 30$

$6u + 3u - 5u = 30$

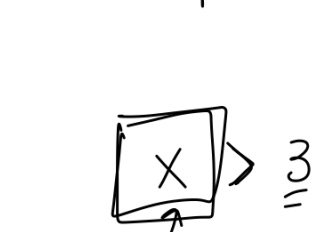
$9u - 5u = 30$

$\frac{4u}{4} = \frac{30}{4}$

$$\boxed{u = \frac{30}{4} = \frac{15}{2} = 7.5}$$

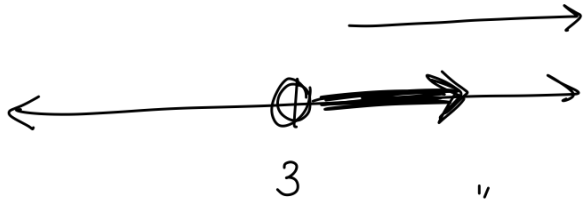
1-4 Solving Inequalities

Graph Inequalities



variable on left

"x is greater than 3"



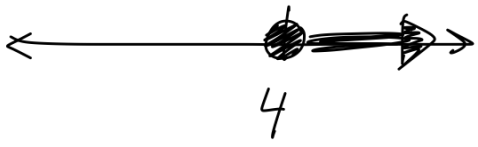
I WANT CHEESY PUFFS!

$>$ $<$ O

$\geq$ $\leq$ ●

$4 \leq x$

right opposite



$\leq$ $\geq$ $\leq$

1.) $\dfrac{3(y-5)}{3} \leq \dfrac{6}{3}$

$3(y-5) = 6$

$y - 5 \leq 2$

$+5 \quad +5$

$\boxed{y} \leq 7$

$3 - 4m < 11$
$-3 \quad\quad -3$

$-4m < 8$

$\frac{-4m}{-4} < \frac{8}{-4}$

$m > -2$

You must flip the inequality when you multiply/divide by a negative.

$\frac{3x}{3} > \frac{-9}{3}$

$x > -3$

5.) $-2(3-h) + 2h \geq 0$

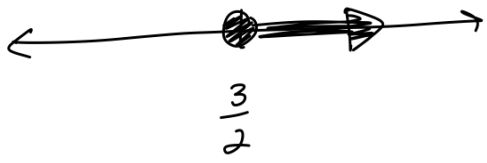
$-6 + 2h + 2h \geq 0$

$-6 + 4h \geq 0$
$+6 \quad\quad +6$

$\frac{4h}{4} \geq \frac{6}{4}$

$h \geq \frac{3}{2}$

bar closed



10.) Compound Inequality

$-9 \leq 4x + 3 \leq 11$

$-3 \quad -3 \quad -3$

$\frac{-12}{4} \leq \frac{4x}{4} \leq \frac{8}{4}$

$-3 \leq x \leq 2$

$-3 \leq x \qquad x \leq 2$

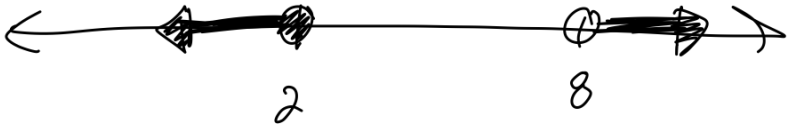
11.) $\frac{16x}{16} \leq \frac{32}{16}$ or $\frac{-5x}{-5} < \frac{-40}{-5}$

$x \leq 2$ $\qquad x > 8$

and

convergent

divergent



HW 1-3 evens
1-4 evens
Quiz 2 due 21st
Online HW open by Wed
Quiz 3 due 28th