Math 1215 Hw2 Name KEY

Solve

1. $-5x = 7x + 1$

$+5x \quad +5x$

$0 = 12x + 1$

$-1 \quad -1$

$-1 = 12x$

$x = -\frac{1}{12}$

2. $5 - 5x = x - 2(2 + x)$

$5 - 5x = x - 4 - 2x$

$5 - 5x = -x - 4$

$+5x \quad +5x$

$5 = 4x - 4$

$+4 \quad +4$

$9 = 4x$

$x = \frac{9}{4}$

3. $2(x-3) = \frac{1}{2}(4x-12)$

$2x - 6 = 2x - 6$

solution is all real #'s

4. $3(x+4) - 1 = 3x - 2$

$3x + 12 - 1 = 3x - 2$

$3x + 11 = 3x - 2$

$11 = -2?$

NO SOLUTION

5. $2(r + 10) = 1/5(15r + 100)$

$2r + 20 = 3r + 20$

$-2r \quad -2r$

$20 = r + 20$

$-20 \quad -20$

$0 = r$

$r = 0$

6. $3(x+2) = -5 - 2(x-3)$

$3x + 6 = -5 - 2x + 6$

$3x + 6 = 1 - 2x$

$+2x \quad +2x$

$5x + 6 = 1$

$-6 \quad -6$

$5x = -5$

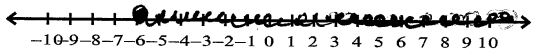
$x = -1$

7. $\frac{-2}{3}n \leq 4$

times $(\frac{3}{2})$ and flip

$n \geq -\frac{3}{2}(4)$

$\boxed{n \geq -6}$



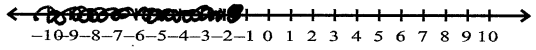
8. $2 \leq \frac{-3}{5}w + 1$

times $(-\frac{5}{3})$, flip

$-1 \quad -1$

$1 \leq -\frac{3}{5}w$

$\boxed{-\frac{5}{3} \geq w}$



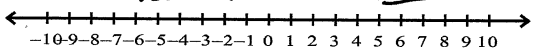
9. $2x - 3 > 2(x-1)$

$2x - 3 > 2x - 2$

$-3 > -2$

never true

$\boxed{\text{NO SOLUTION}}$

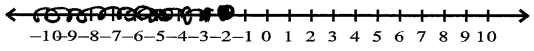


10. $7x - 4 \leq 3(x - 4)$

$7x - 4 \leq 3x - 12$

$+4 \quad +4$

$7x \leq 3x - 8$



$-3x \quad -3x$

$4x \leq -8$

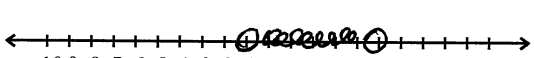
$\boxed{x \leq -2}$

11. $-2 < 3x + 1 < 16$

$-1 \quad -1 \quad -1$

$-3 < 3x < 15$

$-1 < x < 5$



12. $-2x + 7 > 3$ or $3x - 4 \geq 5$

$-7 \quad -7$ $\qquad +4 \quad +4$

$-2x > -4$ $\qquad 3x \geq 9$

$\boxed{x < 2 \text{ OR } x \geq 3}$