Bellwork:

① Multiply: $(3x-5y)^2$

② Find the circumference of a circle if its area is 144π.

$A = \pi r^2$

$144\pi = \pi r^2$

$\sqrt{144} = \sqrt{r^2}$

$r = 12$

$C = 2\pi r$

$C = 2\pi \cdot 12$

$C = 24\pi$

$(3x-5y)(3x-5y)$

$9x^2-15xy-15xy+25y^2$

$9x^2-30xy+25y^2$

10/9 how do I solve absolute value equations?

$|-7| = 7$

$|7| = 7$

$|13| = 13$

$|-13| = 13$

Solve $|x| = 13$

$x = 13$ OR $x = -13$

Solve: $|x+1| = 8$

$x + 1 = 8$

$x = 7$

Check:

$|7+1| =$

$|8| = 8$ ✓

$x + 1 = -8$

$x = -9$

$|-9+1|$

$|-8|$

8 ✓

Is this = to 8?

Ex. $|2x-1|=11$

$2x-1=11$

$+1 \quad +1$

$2x=12$

$x=6$

$2x-1=-11$

$+1 \quad +1$

$2x=-10$

$x=-5$

You Solve:

$|3-5x|=12$

$3-5x=12$

$-5x=9$

$x=-1.8$

$3-5x=-12$

$-3 \quad -3$

$\frac{-5x}{-5}=\frac{-15}{-5}$

$x=3$

Evaluate each expression

$w=-4,\ x=2,\ y=\frac{1}{2},\ z=-6$

① $|2x-8|$

$|2\cdot 2-8|$

$|4-8|$

$|-4|$

4

② $|x|-|y|-|z|$

$|2|-\left|\frac{1}{2}\right|-|-6|$

$2-\frac{1}{2}-6$

$1.5-6$

-4.5

You try: $12 - |10x - 10y|$

$x = 2$

$y = \frac{1}{2}$

$12 - |10 \cdot 2 - 10 \cdot \frac{1}{2}|$

$12 - |20 - 5|$

$12 - |15|$

$12 - 15$

-3

$|-3|$ $|3|$

3 3

$|-104|$ $|104|$

104 104

$-2 \cdot |-5|$

$-2 \cdot 5$

-10

Ex. Evaluate

$$|-2| - |10-13| - \left|\frac{1}{2}\right|$$

$$|-2| - |-3| - \left|\frac{1}{2}\right|$$

$$2 - 3 - \frac{1}{2}$$

$$-1 - \frac{1}{2}$$

-1.5

Solve:

$$|x+1| = 9$$

$x+1 = 9$

$x = 8$

$x+1 = -9$

$x = -10$

Ex. Solve

$|3x-2|=7$

$3x-2=7$

$+2 \quad +2$

$3x=9$

$x=3$

$3x-2=-7$

$3x=-5$

$x=\frac{-5}{3}$

Solve: $|1-2x|=13$

$1-2x=13$

$-2x=12$

$x=-6$

$1-2x=-13$

$-2x=-14$

$x=7$

Solve:

$$|5x+2|=8$$

$5x+2=8$

$5x=6$

$x=\frac{6}{5}$

$5x+2=-8$

$5x=-10$

$x=-2$