Solving for a given variable

1) $x(y+2)=z$ for y

$xy+2x=z$

$-2x \quad -2x$

$\frac{xy}{x}=\frac{z-2x}{x}$

$y=\frac{z-2x}{x}$

2) $\frac{I}{pr}=\frac{prt}{pr}$, for t

$\frac{I}{pr}=t$

3) $qr+s=t$, for q

$qr+s=t$

$-s \quad -s$

$\frac{qr}{r}=\frac{t-s}{r}$

$q=\frac{t-s}{r}$

1) $9|x+8|+10<55$

$-10 \quad -10$

$\frac{9|x+8|}{9}<\frac{45}{9}$

$|x+8|<5$

$x+8<5$ and $x+8>-5$

$x<-3$ and $x>-13$

2) $\frac{3}{-3}+\frac{4}{-3}|3x+7| \geq -89$

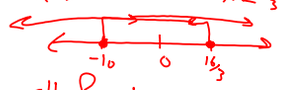
$\frac{4|3x+7|}{4} \geq \frac{-92}{4}$

$|3x+7| \geq -23$

$3x+7 \geq -23$ or $3x+7 \leq 23$

$3x \geq -30$ $\quad 3x \leq 16$

$x \geq -10$ or $x \leq \frac{16}{3}$ $\quad 5\frac{1}{3}$

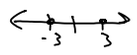


all Reals

3) $|3x|=9$

$3x=9 \quad 3x=-9$

$x=3$ or $x=-3$

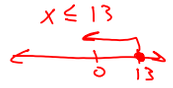


4) $5\left(\frac{x-3}{5}\right) \leq (2)5$

$x-3 \leq 10$

$+3 \quad +3$

$x \leq 13$



Test Questions will come from

- Inequality Problems
- Absolute Value Problems
- Absolute Value Inequality Problems

WS on website

- Problems Similar to 49-54 pg 32 in the textbook