

**6.4: Solving Linear Inequalities by Using Addition and Subtraction - Worksheet**

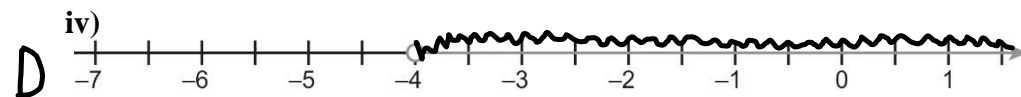
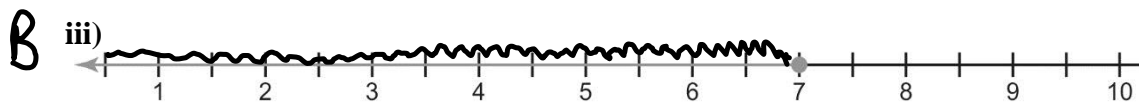
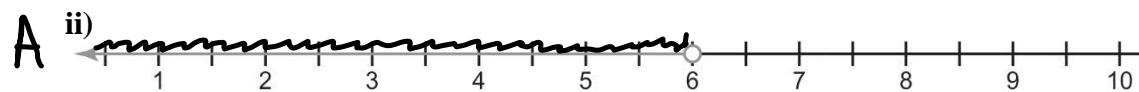
1. Solve each inequality and then match each inequality with the graph of its solution.

a)  $g + 3 < 9$   
 $\begin{array}{r} -3 \quad -3 \\ \hline g < 6 \end{array}$

b)  $5 \geq m - 2$   
 $\begin{array}{r} +2 \quad +2 \\ \hline 7 \geq m \\ m \leq 7 \end{array}$

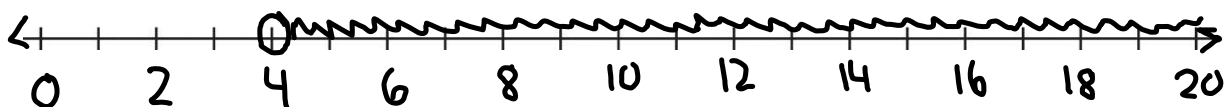
c)  $2 + y \geq -4$   
 $\begin{array}{r} -2 \quad -2 \\ \hline y \geq -6 \end{array}$

d)  $-1 < f + 3$   
 $\begin{array}{r} -3 \quad -3 \\ \hline -4 < f \\ f > -4 \end{array}$



2. Solve, then graph each inequality.

a)  $7t - 4 > 3t + 12$   
 $\begin{array}{r} -3t \quad -3t \\ \hline 4t - 4 > 12 \\ +4 \quad +4 \\ \hline 4t > 16 \\ \frac{4t}{4} > \frac{16}{4} \\ \hline t > 4 \end{array}$



$$\text{b) } 4.2s - 15.25 \leq 4 - 1.3s$$

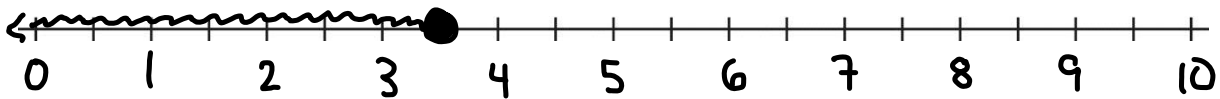
$$+1.3s \quad \quad \quad +1.3s$$

$$5.5s - 15.25 \leq 4$$

$$+15.25 \quad \quad \quad +15.25$$

$$\frac{5.5s}{5.5} \leq \frac{19.25}{5.5}$$

$$s \leq 3.5$$



$$\text{c) } \frac{1}{2} + \frac{4}{7}p > \frac{13}{10}$$

*(Note: The original image has handwritten multipliers:  $\times 35$  above the 1,  $\times 10$  above the 4,  $\times 35$  below the 2, and  $\times 10$  below the 7.)*

① get common denominators.

$$\frac{35}{70} + \frac{40}{70}p > \frac{91}{70}$$

② work with the numerators.

$$35 + 40p > 91$$

$$-35 \quad \quad \quad -35$$

$$\frac{40p}{40} > \frac{56}{40}$$

$$p > \frac{7}{5} = 1\frac{2}{5} = 1.4$$

