

6) The sum of twice a number and 5 is at most 15. What are the possible values for the number?

L
 $x = \text{number}$

I
$$\begin{array}{r} 2x + 5 \leq 15 \\ -5 \quad -5 \\ \hline 2x \leq 10 \\ \frac{2x}{2} \leq \frac{10}{2} \\ x \leq 5 \end{array}$$

S
The possible values are 5 and every number smaller than 5.

7) The cost of a gallon of orange juice is \$3.50. What is the maximum number of containers you can buy for \$15?

L
 $x = \text{number of containers}$

I
$$\begin{array}{r} 3.50x \leq 15 \\ \frac{3.50x}{3.50} \leq \frac{15}{3.50} \\ x \leq 4.28571429 \end{array}$$

S
The maximum # of containers is 4.

8) Three times a number increased by 8 is no more than 4. Find the greatest number.

L
 $x = \text{a number}$

I
$$\begin{array}{r} 3x + 8 \leq 4 \\ -8 \quad -8 \\ \hline 3x \leq -4 \\ \frac{3x}{3} \leq \frac{-4}{3} \\ x \leq -1.\bar{3} \\ x \leq -1\frac{1}{3} \end{array}$$

S
The greatest number is -2 .

9) Two-thirds of a number plus 5 is greater than 12. Find the least integer.

L
 $x = \text{a number}$

I
$$\begin{array}{r} \frac{2}{3}x + 5 > 12 \\ -5 \quad -5 \\ \hline \frac{2}{3}x > 7 \end{array}$$

$$\left(\frac{3}{2}\right) \frac{2}{3}x > 7 \left(\frac{3}{2}\right)$$

$$x > 10.5$$

S
The least integer is 11.