

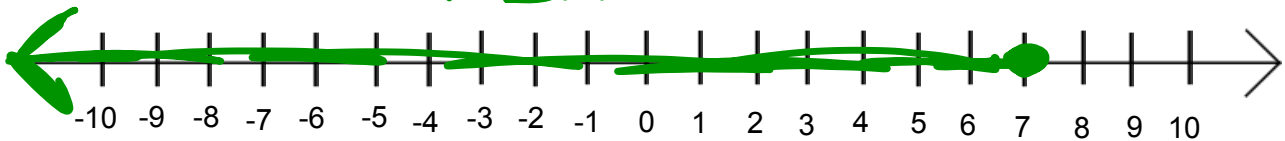
HW: Worksheet

Warm up:

Solve and graph.

$$x \leq 7$$

$$\begin{array}{r} -9 \leq 5 - 2x \\ \underline{-5 \quad -5} \\ -14 \leq -2x \\ \underline{-2 \quad -2} \\ 7 \geq x \end{array}$$



$$6.1a - 3.18 \leq 32.20$$

$$+ 3.18 \quad + 3.18$$

$$\frac{6.1a}{6.1} \leq \frac{35.38}{6.1}$$

$$a \leq 5.8$$

$$\begin{array}{r} 6.1 \\ \times 6 \\ \hline 366 \end{array}$$

$$\begin{array}{r} 6.1 \\ \times 8 \\ \hline 488 \end{array}$$

$$5.8$$

$$61 \overline{) 353.8}$$

$$\begin{array}{r} - 305 \downarrow \\ \hline 488 \\ - 488 \\ \hline 0 \end{array}$$

$$2\frac{1}{3} - \frac{3}{4} > \frac{3}{4} - 2n$$

$$\frac{28}{12} - \frac{9}{12} - \frac{3}{4} > -\frac{3}{4} - 2n$$

$$\frac{19}{12} > -2n$$

$$\frac{19}{12} \cdot \left(-\frac{1}{2}\right) > -2n \cdot \left(-\frac{1}{2}\right)$$

$$-\frac{19}{24} < n$$

$$n > -\frac{19}{24}$$

After spending \$42 at Walmart, Joe still had more than \$80 in his wallet. How much money did he have when he entered the store?

$$\begin{array}{r} m - 42 > 80 \\ + 42 \quad + 42 \\ \hline \end{array}$$

$$m > 122$$

He had more than \$122

A local Italian restaurant charges \$11 for a large pizza and \$1.50 for each topping. If you have \$20, how many toppings can you add to your pizza?

$$\begin{array}{r} 11 + 1.50t \leq 20 \\ -11 \qquad \qquad \qquad -11 \\ \hline 1.50t \leq 9 \\ \frac{1.50}{1.50} \qquad \frac{1.50}{1.50} \\ \hline t \leq 6 \end{array}$$

$$\begin{array}{r} 15 \overline{)90} \\ \underline{-90} \\ 0 \end{array}$$

6 toppings
or less

An online savings account pays 2% annual interest. If you want to make at least \$400 in interest this year, how much money do you need to have in the account?

$$\frac{0.02x}{0.02} \geq \frac{400}{0.02}$$
$$x \geq 20000$$

$$\begin{array}{r} 20000 \\ 2 \overline{)40000} \\ \underline{-4} \\ 0 \end{array}$$

\$20000 or more

- 1) Ophelia makes \$14/h working at the bank. She is saving up for a TV that costs \$500. If she already has \$200 saved, how many whole hours will she need to work before she has enough money for the TV?
- 2) Greg is selling his art at a craft fair. After selling 3 of his paintings, he had less than 10 left. How many paintings did he bring to the craft fair?
- 3) Working as a waitress, Donna makes \$150 per week in base pay plus a 20% tip on the cost of each meal she serves. What must be the total cost of the meals she serves if she wants to make at least \$600 per week?
- 4) A tank of water currently has 50 gallons in it but it has developed a leak causing it to lose 3 gallons per minute. After how many minutes will the tank have less than 32 gallons in it?
- 5) How long can each side of an equilateral triangle be if its perimeter is at most 84cm?

1) Ophelia makes \$14/h working at the bank. She is saving up for a TV that costs \$500. If she already has \$200 saved, how many whole hours will she need to work before she has enough money for the TV?

$$\begin{array}{r} 200 + 14h \geq 500 \\ - 200 \qquad \qquad - 200 \\ \hline \end{array}$$

$$\begin{array}{r} 14h \geq 300 \\ \hline 14 \quad 14 \end{array}$$

$$h \geq 21.4 \dots$$

at least 22h

$$\begin{array}{r} 21.4 \\ 14 \overline{) 3000} \\ \underline{- 280} \\ 20 \\ \underline{- 140} \\ 60 \\ \underline{- 56} \\ 4 \end{array}$$

2) Greg is selling his art at a craft fair. After selling 3 of his paintings, he had less than 10 left. How many paintings did he bring to the craft fair?

$$\begin{array}{r} p - 3 < 10 \\ + 3 \quad + 3 \\ \hline p < 13 \end{array}$$

less than 13 paintings

3) Working as a waitress, Donna makes \$150 per week in base pay plus a 20% tip on the cost of each meal she serves. What must be the total cost of the meals she serves if she wants to make at least \$600 per week?

$$\begin{array}{r} 150 + 0.2m \geq 600 \\ -150 \qquad \qquad -150 \\ \hline \end{array}$$

$$\begin{array}{r} 0.2m \geq 450 \\ \hline 0.2 \quad 0.2 \\ \hline m \geq 2250 \end{array}$$

$$\begin{array}{r} 2250 \\ 2 \overline{)4500} \\ \underline{-40} \\ 50 \\ \underline{-40} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

at least
\$2250 worth
of meals

5) How long can each side of an equilateral triangle be if its perimeter is at most 84cm?

January 19, 2022

