

Warm up:

Evaluate.

$$\begin{array}{r} 7.24 \\ + 3.14 \\ \hline 10.38 \end{array}$$

$$1) -7.24 - 3.14 = -7.24 + (-3.14)$$

$$\underline{-10.38}$$

$$2) 2.98 + (-4.4)$$

$$\begin{array}{r} 3 \text{ } 4 \text{ } 3 \text{ } 0 \\ 4.40 \\ - 2.98 \\ \hline 1.42 \end{array}$$

$$\underline{-1.42}$$

$$3) -4\frac{1}{3} - (-2\frac{5}{6})$$

$$-4\frac{1}{3} + 2\frac{5}{6}$$

$$-\frac{1}{3} + \frac{1}{6}$$

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

$$-2 + 1$$

$$\begin{array}{r} -2 \\ + 1 \\ \hline -1 \end{array}$$

$$-\frac{9}{6} = -\frac{3}{2} = \underline{-1\frac{1}{2}}$$

HW Solutions

$$\textcircled{3} \quad \begin{array}{r} -11 \geq 4 - 3x \\ -4 \quad -4 \end{array}$$

$$\begin{array}{r} \hline -15 \geq -3x \\ \hline -3 \quad -3 \end{array}$$

$$\begin{array}{r} \hline 5 \leq x \end{array}$$

$$\textcircled{x \geq 5}$$

⑦

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

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

$$x > -4$$

$$\begin{array}{r} \textcircled{2} \quad 2x - 6 > 8 \\ \quad \quad +6 \quad +6 \\ \hline 2x > 14 \\ \hline \frac{2x}{2} > \frac{14}{2} \\ \hline \textcircled{x > 7} \end{array}$$

⑤

$$\begin{array}{r} -x + 2 \geq -5 \\ -2 \quad -2 \\ \hline -x \geq -7 \\ \hline -1 \quad -1 \\ \hline x \leq 7 \end{array}$$

Write an inequality to model the following situation.

You must be over 12 years old to play.

$$x > 12$$
$$a > 12$$

You must be at least 48 inches tall to ride the roller coaster.

$$g \geq 48$$

A suitcase must weigh less than 40 pounds.

$$w < 40$$

A fuel tank holds at most 16 gallons of gasoline.

$$t \leq 16$$

You must be 12 years of age or younger to order from the children's menu.


$$a \leq 12$$

Key Words/Phrases

-less than
-fewer
than



-greater
than
-more than
-exceeds



-less than
or equal to
-no more
than
-at most



-greater
than or
equal to
-no less
than
-at least



The Airbus A380 can seat up to 853 passengers. There are currently 632 passengers boarded on the airplane. Write and solve an inequality to determine how many more people are able to board.

$$\begin{array}{r} 632 + p \leq 853 \\ -632 \quad -632 \\ \hline \end{array}$$

$$p \leq 221$$

At most 221 passengers

Joshua spends \$0.25 every time he sends a text message. Write and solve an inequality to find how many text messages he can send with \$3.00.

$$0.25t \leq 3$$

$$\frac{0.25t}{0.25} \leq \frac{3}{0.25}$$

$$t \leq 12$$

$$0.25 \overline{) 3.00}$$

$$\begin{array}{r} 12 \\ 25 \overline{) 300} \\ \underline{-25} \\ 50 \\ \underline{-50} \\ 0 \end{array}$$

12 texts or less

A local gym charges \$5 each time you enter. They also have yearly memberships for \$190. Write and solve an inequality to find how many times a person should use the gym so that a yearly membership is less expensive than paying each time.

$$\frac{5x}{5} > \frac{190}{5}$$
$$x > 38$$

more than 38 times

A rental car company charges \$45 plus an additional \$0.19 per mile to rent a car. How many miles can Lawrence drive if he does not want to spend more than \$100?