

Name Keely

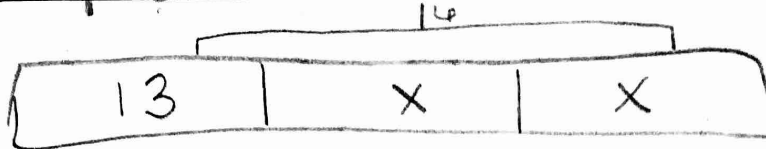
Homework: Write and solve two - step equations

The Kaplan family takes a trip to the nature center. They attend a special show and take the time to have lunch.

1. Admission costs \$13. The cost for Mr. Kaplan's admission and 2 drinks is \$16. What is the price of each drink?

Define a variable $x = \text{price of each drink}$

Draw a bar diagram:



Write an equation $13 + 2x = 16$

Solve the equation:

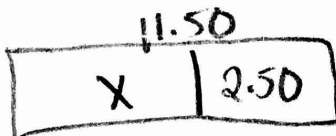
$$\begin{array}{r} -13 \\ \hline 2x = 3 \end{array} \quad x = 1.5$$

Write the answer with a label each drink is \$1.50

2. A child decides to eat lunch at the Healthy Snack Shack. He purchases a lunch special and leaves a tip of \$2.50. If he spends \$11.50, what was the cost of his lunch?

Define a variable $x = \text{cost of lunch}$

Draw a bar diagram:



Write an equation $x + 2.50 = 11.50$

Solve the equation:

$$\begin{array}{r} -2.50 \\ \hline x = 9 \end{array}$$

Write the answer with a label lunch cost \$9.00

* order of terms doesn't matter, only signs!

3.) Allie had \$24 to spend on seven pencils. After buying them she had \$10. How much did each pencil cost?

x = # for pencils

$$\begin{array}{r} 10 + 7x = 24 \text{ or } 24 - 7x = 10 \\ -10 \quad -10 \\ \hline 7x = 14 \\ \frac{7x}{7} = \frac{14}{7} \\ x = 2 \end{array}$$

same answer

Each pencil cost \$2.00

5.) The sum of six times a number and negative twelve is six. What is the number?

n = the number

$$\begin{array}{r} 6n + -12 = 6 \\ +12 \quad +12 \\ \hline 6n = 18 \end{array}$$

$$\frac{6n}{6} = \frac{18}{6}$$

n = 3

The # is 3.

7.) ^{total} 331 students went on a field trip. Six buses were filled and 7 students traveled in cars. How many students were in each bus?

x = # of students on bus

$$\begin{array}{r} 6x + 7 = 331 \\ -7 \quad -7 \\ \hline 6x = 324 \\ \frac{6x}{6} = \frac{324}{6} \end{array}$$

x = 54

54 students on the bus

4.) The difference of two times a number and 8 is negative ten. What is the number?

n = the number

$$\begin{array}{r} 2n - 8 = -10 \\ +8 \quad +8 \\ \hline 2n = -2 \end{array}$$

$$\frac{2n}{2} = \frac{-2}{2}$$

n = -1

The # is -1.

6.) How old am I if 400 reduced by 2 times my age is 244?

x = age

or 244 + 2x = 400
same answer

$$\begin{array}{r} 400 - 2x = 244 \\ -400 \quad -400 \\ \hline -2x = -156 \\ \frac{-2x}{-2} = \frac{-156}{-2} \end{array}$$

x = 78

The age is 78.

8.) Jill sold half of her comic books and then bought sixteen more. She now has 36. With how many did she begin?

x = # of comics began with

$$\begin{array}{r} \frac{1}{2}x + 16 = 36 \\ -16 \quad -16 \\ \hline \frac{1}{2}x = 20 \end{array}$$

~~$$\frac{2}{2} \times \frac{1}{2}x = 20 \cdot \frac{2}{2}$$~~

x = 40

She began with 40 comic books