

Review: Applications of Equations

For each, define a variable, write an equation & solve.

- 1) Sally has 6 more than twice as many customers as when she started her business. Currently, she has 98 customers. How many did she have when she started?
- 2) A playing field is 75 yds. shorter than 3 times its width. Its perimeter is 370 yds. Find its dimensions.
- 3) A cell phone plan charges you \$70.00 per month & 50¢ per text message. After the first month, your bill is \$95.00. How many messages did you send?
- 4) One fifth of a number plus five times that number is equal to seven times the number less 18. Find the number.

Answers:

1) x = customers at start

$$6 + 2x = 98$$

$$x = 46 \text{ customers at start}$$

2) w = width of field

$$2w + 2(3w - 75) = 370$$

$$w = 65 \text{ yds} \quad L = 120 \text{ yds}$$

3) m = # of messages

$$70 + .50m = 95$$

$$m = 50 \text{ messages}$$

4) x = the number

$$\frac{1}{5}x + 5x = 7x - 18$$

$$x = 10$$