

- 7-33. A homeowner must reduce the use of his home's electricity. The home currently consumes 25.7 kwh (kilowatt hours) of electricity per day, and the homeowner must reduce the use by 20%. Find the amount of electricity that will be used after the reduction in two different ways, using two different scale factors.

$$\text{N.A.} = 80\% \text{ of } 25.7$$

$$x = 0.8 \cdot 25.7$$

$$x = 20.56 \text{ Kwh}$$

- 7-34. Copy and simplify the following expressions by combining like terms, making zeros, and using the Distributive Property. Using algebra tiles may be helpful.

a. $(-1) + 4x + 2 + 2x + x$

$$4x + 2x + x - 1 + 2$$

$$7x + 1$$

b. $-8x + 4 + (-3) + 10x$

$$-8x + 10x + 4 - 3$$

$$2x + 1$$

c. $(-4) + 1x^2 + 3x + 4$

$$1x^2 + 3x + 4 - 4$$

$$1x^2 + 3x + 0$$

$$x^2 + 3x$$

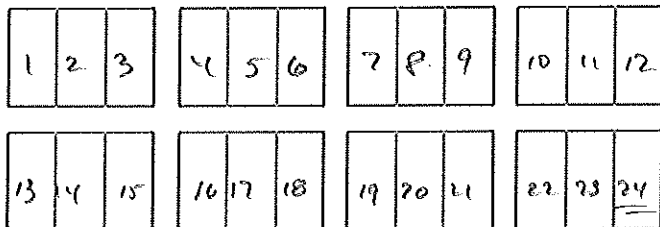
d. $2(3x - 2)$

$$2(3x) - 2(2)$$

$$6x - 4$$

- 7-35. Study the following division problems and the diagrams that represent them. Answer the question below each diagram. Homework Help

$$8 \div \frac{1}{3}$$

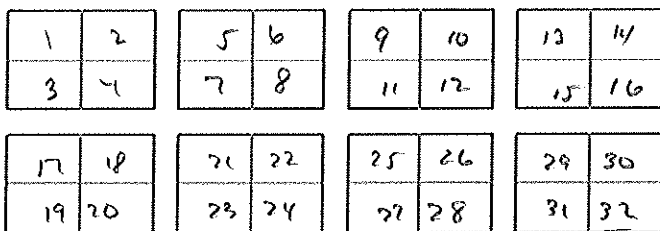


How many thirds?

$$8 \div \frac{1}{3} = 8 \cdot \frac{3}{1}$$

$$= 24$$


$$8 \div \frac{1}{4}$$



How many fourths?

$$8 \div \frac{1}{4} = 8 \cdot \frac{4}{1}$$

$$= 32$$

- **7-38.** Read the Math Notes boxes in this lesson and in the previous lesson. Use the information to complete the following problems. 7-38 HW eTool (CPM). Homework Help 

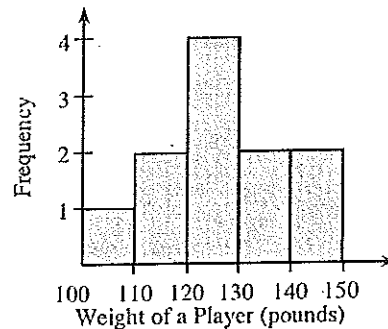
The coach of the girls' basketball team weighed each player. Their weights in pounds were 120, 122, 126, 130, 133, 147, 115, 106, 120, 112, and 142.

- a. Make a stem-and-leaf plot of the team players' weights.

stem	leaf
10	6
11	2 5
12	0 0 2 6
13	0 3
14	2 7

KEY
10|6 = 106

- b. Make a histogram of the teams' weights.



- c. Describe the shape and spread of the data. That is, is it symmetric or non-symmetric? Does it have more than one peak or only one? Is it tightly packed together or widely spread out?

The data is symmetric, single-peaked, and relatively closely packed.

- d. Does this data have any outliers? Which measure of center, mean or median, would be appropriate to use to describe the typical weight?

There are no outliers; therefore, either the mean or median would be appropriate.

- e. What is the typical weight of a player on the team?

~~120~~, ~~122~~, ~~126~~, ~~130~~, ~~133~~, 147, ~~115~~, ~~106~~, ~~120~~, ~~112~~, ~~147~~

106, 112, 115, 120, 120, 122, 126, 130, 133, 142, 147

$$\text{median} = 122 \text{ lbs}$$

$$\text{mean} = \frac{1373}{11}$$

$$= 124 \frac{81}{99}$$

- f. What is the range of the data?

$$\begin{aligned} \text{range} &= 147 - 106 \\ &= 41 \end{aligned}$$