

Write an expression to model each statement.

1. The difference of twenty and the quotient of five and an unknown number.

$$20 - (5 \div x) \quad 20 - \frac{5}{x}$$

2. Eight less than three times a number.

$$3x - 8$$

3. Six times the quantity Seven plus a number.

$$6(7 + b)$$

4. The product of two and the cube of a number.

$$2x^3$$

Write an equation to model each statement. Define your variables.

5. The area of a square if all sides have a length of c feet.

EQ:

Variables:

$$A = c \cdot c$$

$$A = c^2$$

A = area
 c = length
of
a side

6. The total number of basketball players at a 3-on-3 tournament if all teams had 4 players.

EQ:

$$T = 4x$$

Variables:

T = Total
#players
 x = # of
Teams

7. You have 20 dollars more than me.

EQ:

Variables:

$$A = C + 20$$

or

$$C = A - 20$$

A = \$ you
have
 C = \$ me
has

8. The amount of money you would have spent at the store if you bought some cans of pop for \$1.5 each and some bags of chips for \$2 each.

EQ:

$$T = 1.50C + 2B$$

Variables: $T = \text{TOTAL \$ Spent}$
 $B = \text{bags of chips}$
 $C = \text{\# cans of pop}$

9. Write an equation for the amount of money a plumber would charge you if they charge \$75 for the house call then \$30 per hour for repairs.

EQ:

$$C = 75 + 30h$$

$$C = 30h + 75$$

rate of change initial charge

Variables: $C = \text{\$ charged}$
 $h = \text{\# hrs}$

10. At the sporting goods store basketballs cost \$25 each and volleyballs cost \$20 each. Write an equation that models the cost of buying some basketballs and some volleyballs.

EQ:

$$A = 25B + 20V$$

Variables: $A = \text{TOTAL \$ Spent}$
 $B = \text{\# b-balls}$
 $V = \text{\# v-balls}$