**8. MUSIC DOWNLOADS:** Emily belongs to an Internet music service that charges $5.99 per month and $0.89 per song. Write and solve an equation to find the total amount Emily spends if she downloads 10 songs this month.

HELP: The cost of the music service is a flat rate. The variable is the number of songs she downloads. The total cost is the price of the service plus $0.89 times the number of songs.

$$C = .89n + 5.99$$

$$14.89$$

**9. VOLLEYBALL:** Your town decides to build a volleyball court. If the court is approximately 40 by 70 feet and its surface is of sand, one foot deep, the court will require about 166 tons of sand. A local sand pit sells sand for $11.00 per ton with a delivery charge of $3.00 per ton. Write and solve an equation to find the total cost of the sand for this court.
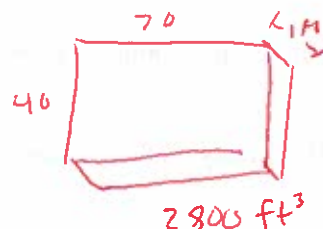
$$11(166)$$
$$\$1826$$
$$+ \text{delivery } 3(166)$$
$$\$498$$

$$3 + 11$$
$$C = 14x$$
$$2324$$

70   1ft
40
2800 ft³

**10. AUTO REPAIR:** A mechanic repairs Mr. Estes' car. The amount for parts is $48.00 and the rate for the mechanic is $40.00 per hour. Write and solve an equation to find the total cost of repairs to Mr. Estes' car if the mechanic works for 1.5 hours.

$$C = 48 + 40x$$

$$108$$

Find the solution of each equation if the replacement sets are $x = \left\{\frac{1}{4}, \frac{1}{2}, 1, 2, 3\right\}$ and $y = \{2, 4, 6, 8\}$.

11. $x + \frac{1}{2} = \frac{5}{2}$   ②

12. $x^2 - 1 = 8$   ③

13. $(y + 1)^2 = 9$   ②

14. Which of the following sentences is true?

A. $\dfrac{5 + 20}{x} = x$   when $x = 5$  ✓

B. $\dfrac{1}{2}x + 5 = 11$   when $x = 6$
   $8 \neq 11$

C. $\dfrac{x + 20}{2} = 14$   when $x = 4$
   $12 \neq 14$

D. $3x + 5 < x^2$   when $x = 4$
   $17 \not< 16$