

**A.M.2: Conversions 2: Solve problems involving conversions within measurement systems, given the relationship between the units**

- 1 Peter walked 8,900 feet from home to school.

$$1 \text{ mile} = 5,280 \text{ feet}$$

How far, to the *nearest tenth of a mile*, did he walk?

- 1) 0.5
- 2) 0.6
- 3) 1.6
- 4) 1.7

- 2 A parking lot is 100 yards long. What is the length of  $\frac{3}{4}$  of the parking lot, in feet?

$$1 \text{ yard} = 3 \text{ feet}$$

- 1) 300
- 2) 225
- 3) 75
- 4) 25

- 3 A total of 1680 ounces of pet food have to be packed in 5-pound bags. How many 5-pound bags of pet food can be packed?

$$1 \text{ pound} = 16 \text{ ounces}$$

- 1) 21
- 2) 28
- 3) 105
- 4) 336

- 4 Elizabeth is baking chocolate chip cookies. A single batch uses  $\frac{3}{4}$  teaspoon of vanilla. If

Elizabeth is mixing the ingredients for five batches at the same time, how many tablespoons of vanilla will she use?

$$3 \text{ teaspoons} = 1 \text{ tablespoon}$$

- 1)  $1\frac{1}{4}$
- 2)  $1\frac{3}{4}$
- 3)  $3\frac{3}{4}$
- 4)  $5\frac{3}{4}$

- 5 If a United States dollar is worth \$1.41 in Canadian money, how much is \$100 in Canadian money worth in United States money, to the *nearest cent*?

- 6 Roberta needs ribbon for a craft project. The ribbon sells for \$3.75 per yard. Find the cost, in dollars, for 48 inches of the ribbon.

- 7 Mrs. Chen owns two pieces of property. The areas of the properties are 77,120 square feet and 33,500 square feet.

$$43,560 \text{ square feet} = 1 \text{ acre}$$

Find the total number of acres Mrs. Chen owns, to the *nearest hundredth of an acre*.

- 8 Which expression can be used to change 75 kilometers per hour to meters per minute?

- 1)  $\frac{75 \text{ km}}{1 \text{ hr}} \times \frac{1 \text{ km}}{1,000 \text{ m}} \times \frac{1 \text{ hr}}{60 \text{ min}}$   
2)  $\frac{75 \text{ km}}{1 \text{ hr}} \times \frac{1 \text{ km}}{1,000 \text{ m}} \times \frac{60 \text{ min}}{1 \text{ hr}}$   
3)  $\frac{75 \text{ km}}{1 \text{ hr}} \times \frac{1,000 \text{ m}}{1 \text{ km}} \times \frac{1 \text{ hr}}{60 \text{ min}}$   
4)  $\frac{75 \text{ km}}{1 \text{ hr}} \times \frac{1,000 \text{ m}}{1 \text{ km}} \times \frac{60 \text{ min}}{1 \text{ hr}}$

- 9 If the speed of sound is 344 meters per second, what is the approximate speed of sound, in meters per hour?

60 seconds = 1 minute  
60 minutes = 1 hour

- 1) 20,640  
2) 41,280  
3) 123,840  
4) 1,238,400
- 10 Last year, Nick rode his bicycle a total of 8000 miles. To the *nearest yard*, Nick rode an average of how many yards per day?

1 mile = 1760 yards  
1 year = 365 days

- 1) 22  
2) 236  
3) 1659  
4) 38,575

- 11 A soda container holds  $5\frac{1}{2}$  gallons of soda. How many ounces of soda does this container hold?

1 quart = 32 ounces  
1 gallon = 4 quarts

- 1) 44  
2) 176  
3) 640  
4) 704

- 12 Andy is 6 feet tall. If 1 inch equals 2.54 centimeters, how tall is Andy, to the *nearest centimeter*?

- 1) 15  
2) 30  
3) 183  
4) 213

- 13 Angela wants to purchase carpeting for her living room. The dimensions of her living room are 12 feet by 12 feet. If carpeting is sold by the square yard, determine how many square yards of carpeting she must purchase.

3 feet = 1 yard  
9 square feet = 1 square yard

- 14 A jogger ran at a rate of 5.4 miles per hour. Find the jogger's *exact* rate, in feet per minute.

1 mile = 5,280 feet

**A.M.2: Conversions 2: Solve problems involving conversions within measurement systems, given the relationship between the units**  
**Answer Section**

1 ANS: 4

$$8900 \text{ ft} \times \frac{1 \text{ mi}}{5280 \text{ ft}} \approx 1.7 \text{ mi}$$

REF: 081210ia

2 ANS: 2

$$100 \text{ yd} \cdot \frac{3 \text{ ft}}{1 \text{ yd}} \cdot \frac{3}{4} = 225$$

REF: 081415ia

3 ANS: 1

$$5 \times 16 = 80 \text{ oz. } \frac{1680}{80} = 21$$

REF: 061521ia

4 ANS: 1

$$\frac{3}{4} \times 5 = \frac{15}{4} \text{ teaspoons} \times \frac{1 \text{ tablespoon}}{3 \text{ teaspoons}} = \frac{5}{4} = 1 \frac{1}{4} \text{ tablespoon}$$

REF: 061228ia

5 ANS:

$$70.92 \text{ C\$}100 \times \frac{\$1}{\text{C\$}1.41} \approx \$70.92$$

REF: 060731a

6 ANS:

$$5. \ 48 \text{ inches} \times \frac{1 \text{ yard}}{36 \text{ inches}} = \frac{4}{3} \text{ yards} \times \$3.75 = \$5.00$$

REF: 011131ia

7 ANS:

$$77120 + 33500 = 110620 \text{ sq. ft.} \times \frac{1 \text{ acre}}{43560 \text{ sq. ft.}} \approx 2.54 \text{ acres}$$

REF: 081133ia

8 ANS: 3

REF: 011317ia

9 ANS: 4

$$\frac{344 \text{ m}}{\text{sec}} \times \frac{60 \text{ sec}}{1 \text{ min}} \times \frac{60 \text{ min}}{1 \text{ hr}} = 1,238,400 \frac{\text{m}}{\text{hr}}$$

REF: 060911ia

10 ANS: 4

$$\frac{8000 \text{ mi}}{1 \text{ yr}} \times \frac{1760 \text{ yd}}{1 \text{ mi}} \times \frac{1 \text{ yr}}{365 \text{ d}} \approx 38,575 \text{ yd/d}$$

REF: 011522ia

11 ANS: 4

$$5.5 \text{ g} \times \frac{4 \text{ q}}{1 \text{ g}} \times \frac{32 \text{ oz}}{1 \text{ q}} = 704 \text{ oz}$$

REF: 061305ia

12 ANS: 3

$$6 \text{ feet} \times \frac{12 \text{ inches}}{1 \text{ foot}} = 72 \text{ inches. } 72 \text{ inches} \times \frac{2.54 \text{ cm}}{1 \text{ inch}} \approx 183 \text{ cm}$$

REF: 060709a

13 ANS:

16. 12 feet equals 4 yards.  $4 \times 4 = 16$ .

REF: 011031ia

14 ANS:

$$\frac{5.4 \text{ miles}}{\text{hour}} \times \frac{5280 \text{ feet}}{\text{mile}} \times \frac{1 \text{ hour}}{60 \text{ min}} = \frac{475.2 \text{ ft}}{\text{min}}$$

REF: 081331ia