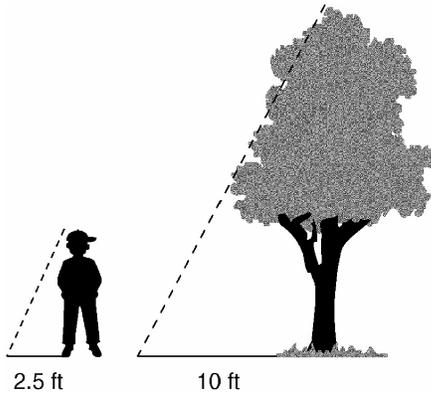


**Unit 1 - Word Problems****Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. Angela and Neil are going to the movies. They each bought a medium popcorn, and Neil got a small soft drink. Angela had a \$10 gift certificate to put toward the cost, and Neil paid the rest, which came to \$19.30. A movie ticket costs \$9.00 and a medium popcorn costs \$4.40. How much does a small soft drink cost at the theater?
- a. \$6.90                      b. \$1.30                      c. \$15.90                      d. \$2.50
- \_\_\_\_\_ 2. A camera manufacturer spends \$2250 each day for overhead expenses plus \$6 per camera for labor and materials. The cameras sell for \$16 each. How many cameras must the company sell in one day to equal its daily costs? If the manufacturer can increase production by 50 cameras per day, what would their daily profit be?
- a. The company must sell 141 cameras to equal its daily costs; \$340  
b. The company must sell 225 cameras to equal its daily costs; \$800  
c. The company must sell 165 cameras to equal its daily costs; \$100  
d. The company must sell 225 cameras to equal its daily costs; \$500
- \_\_\_\_\_ 3. A copy center offers its customers two different pricing plans for black and white photocopies of 8.5 in. by 11 in. pages. Customers can either pay \$0.08 per page or pay \$7.50 for a discount card that lowers the cost to \$0.05 per page. Write and solve an equation to find the number of photocopies for which the cost of each plan is the same.
- a.  $0.08c = 0.05c + 7.50; c = 250$                       c.  $0.05c = 0.08c + 7.50; c = 22.5$   
b.  $0.08c = 0.05c - 7.50; c = 250$                       d.  $7.50 = 0.08c + 0.05c; c = 58$
- \_\_\_\_\_ 4. Nina wants to download games for her video game console. Older games cost 500 points and new releases cost 2000 points. Nina has 20,000 points to use. The equation  $500a + 2000b = 20,000$ , where  $a$  is the number of older games and  $b$  is the number of new releases, models the situation. How many older games can she download if she downloads one new game? four new games?
- a. 36, 24                      c. 44, 56  
b. 10, 10                      d. 9, 9
- \_\_\_\_\_ 5. A van travels 220 miles on 10 gallons of gas. Find how many gallons the van needs to travel 550 miles.
- a. 31 gallons of gas                      c. 115 gallons of gas  
b. 121 gallons of gas                      d. 25 gallons of gas
- \_\_\_\_\_ 6. A package delivery company has determined that they can meet their schedules if they have 4 drivers for every 30 square miles of area they cover. If they want to offer service to a county of 75 square miles, how many drivers must they have?
- a. 12 drivers                      b. 10 drivers                      c. 15 drivers                      d. 9 drivers
- \_\_\_\_\_ 7. School guidelines require that there must be at least 2 chaperones for every 25 students going on a school trip. How many chaperones must there be for 80 students?
- a. 6 chaperones                      c. 3 chaperones  
b. 40 chaperones                      d. 7 chaperones

- \_\_\_\_\_ 8. A tree casts a shadow 10 ft long. A boy standing next to the tree casts a shadow 2.5 ft long. The triangle shown for the tree and its shadow is similar to the triangle shown for the boy and his shadow. If the boy is 5 ft tall, how tall is the tree?



Drawing not to scale

- a. 18 ft                      b. 12.5 ft                      c. 15 ft                      d. 20 ft
- \_\_\_\_\_ 9. The width of a rectangle is 33 centimeters. The perimeter is at least 776 centimeters. Write and solve an inequality to find the possible lengths of the rectangle.
- a.  $33 + l \geq 776; l \geq 743$   
 b.  $2(33) + 2l \geq 776; l \geq 355$   
 c.  $2(33) + 2l \leq 776; l \leq 355$   
 d.  $33 + l \leq 776; l \leq 743$
- \_\_\_\_\_ 10. A student scored 83 and 91 on her first two quizzes. Write and solve a compound inequality to find the possible values for a third quiz score that would give her an average between 85 and 90, inclusive.
- a.  $85 \leq \frac{83 + 91 + n}{3} \leq 90; 81 \leq n \leq 96$   
 b.  $85 \leq \frac{83 + 91}{2} + n \leq 90; -2 \leq n \leq 3$   
 c.  $90 \leq \frac{83 + 91 + n}{3} \leq 85; 96 \leq n \leq 81$   
 d.  $83 \leq \frac{85 + 91 + n}{3} \leq 90; 73 \leq n \leq 94$

**Unit 1 - Word Problems  
Answer Section****MULTIPLE CHOICE**

1. ANS: D REF: 1-1 Solving Multi-Step Equations STA: (5)(A)
2. ANS: D REF: 1-2 Solving Equations With Variables on Both Sides  
STA: (5)(A)
3. ANS: A REF: 1-2 Solving Equations With Variables on Both Sides  
STA: (5)(A)
4. ANS: A REF: 1-3 Literal Equations STA: (12)(E)
5. ANS: D REF: 1-4 Solving Proportions STA: (5)(A)| (2)(D)
6. ANS: B REF: 1-4 Solving Proportions STA: (5)(A)| (2)(D)
7. ANS: D REF: 1-4 Solving Proportions STA: (5)(A)| (2)(D)
8. ANS: D REF: 1-5 Proportions and Similar Figures  
STA: (5)(A)| (2)(D)
9. ANS: B REF: 1-6 Solving Multi-Step Inequalities  
STA: (5)(B)
10. ANS: A REF: 1-7 Compound Inequalities STA: (5)(B)| (3)(H)