**1.*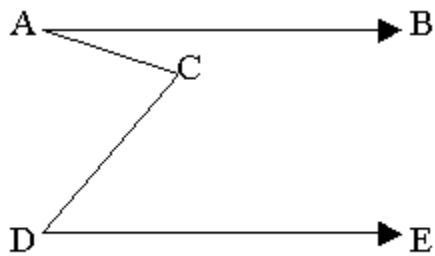* Courier charges for packages to a certain destination are 65 cents for the first 250 grams and 10 cents for each additional 100 grams or part thereof. What could be the weight in grams of a package for which the charge is $1.55 ?

A. 1155

B. 1145

C. 1040

D. 950

E. 259

(figure not to scale)

2. AB and DE are parallel. Angle BAC = 30 , angle CDE = 50. What is the measure of angle ACD ?

A. 100

B. 90

C. 80

D. 70

E. cannot be determined from the information

3. If x / y is an integer, which of the following statements need NOT always be true?

Select ALL such statements.

A. both x and y are integers

B. x is an integer

C. either x or y is negative

D. y / x is an integer

E. x = ny where n is an integer

4. What is the average of four tenths and five thousandths?

A. 25002

B. 2502

C. 0.225

D. 0.2025

E. 0.02025

5. What is the simplified result of following the steps below in order?

(1) add 5y to 2x

(2) multiply the sum by 3

(3) subtract x + y from the product

- ○ A. 5x + 14y
- ○ B. 5x + 16y
- ○ C. 5x + 5y
- ○ D. 6x + 4y
- ○ E. 3x + 12y

6. The total weight of a tin and the cookies it contains is 2 pounds. After ¾ of the cookies are eaten, the tin and the remaining cookies weigh 0.8 pounds. What is the weight of the empty tin in pounds?
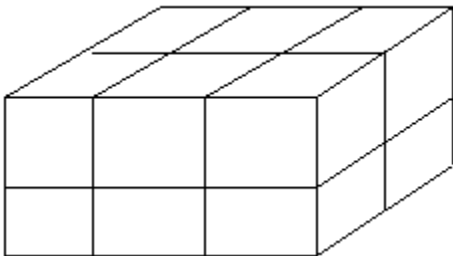
- ○ A. 0.2
- ○ B. 0.3
- ○ C. 0.4
- ○ D. 0.5
- ○ E. 0.6

7. If y ¤ x = y2x for all positive integers, then (3 ¤ 4) ¤ 2 =

- ○ A. 38
- ○ B. 312
- ○ C. 316
- ○ D. 324
- ○ E. 332

8. The first term in a sequence is 1 and the second term is 5. From the third term on each term is the average (arithmetic mean) of all preceding terms. What is the 25th term in the sequence?

- ○ A. 2.5
- ○ B. 3
- ○ C. 5
- ○ D. 25
- ○ E. 50

9. The solid brick shown is made of small bricks of side 1. When the large brick is disassembled into its component small bricks, the total surface area of all the small bricks is how much greater than the surface area of the large brick?

- A. 32
- B. 40
- C. 60
- D. 72
- E. 80

10. $(3x + 2)(2x - 5) = ax^2 + kx + n$.
What is the value of $a - n + k$?

- A. 5
- B. 8
- C. 9
- D. 10
- E. 11

Answer Key

1.	B
2.	C
3.	ABCD
4.	D
5.	A
6.	C
7.	E
8.	B
9.	B
10.	A