1 The only coins that Alexis has are dimes and quarters.

- Her coins have a total value of $5.80.
- She has a total of 40 coins.

Which of the following systems of equations can be used to find the number of dimes, d, and the number of quarters, q, that Alexis has?

A.
$$d + q = 5.80$$
$$40d + 40q = 5.80$$

B.
$$d + q = 40$$
$$5.80d + 5.80q = 40$$

C.
$$d + q = 5.80$$
$$0.10d + 0.25q = 40$$

D.
$$d + q = 40$$
$$0.10d + 0.25q = 5.80$$

2 Which of the following is the solution of the system of equations below?

$$4x + y = 5$$
$$2x - 3y = 13$$

A. $x = 1;\ y = 1$

B. $x = 2;\ y = 3$

C. $x = 2;\ y = -3$

D. $x = 3;\ y = -7$

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3

Sarah walked at a speed of 3 miles per hour. Beneta rode her bicycle at a speed of 9 miles per hour. They both traveled the same distance, but it took Sarah 4 more hours than it took Beneta.

How many hours did it take Beneta?

A. 2

B. 3

C. 4

D. 6

Mark your answer here: 3. Ⓐ Ⓑ Ⓒ Ⓓ

4

Last year, Kristen read a total of 30 fiction and non-fiction books. The number of non-fiction books was 5 less than 4 times the number of fiction books.

What is the total number of **fiction** books that Kristen read last year?

A. 5

B. 7

C. 23

D. 25

Mark your answer here: 4. Ⓐ Ⓑ Ⓒ Ⓓ

5   Which of the following values of x and y are solutions of the system of inequalities shown below?

$$x + 3y \le 16$$
$$x + y \ge 10$$

A. $x = 2 \, ; y = 8$

B. $x = 9 \, ; y = 2$

C. $x = 1 \, ; y = 5$

D. $x = 7 \, ; y = 2$

6   Serena bought some small and large picture frames.

- She paid $3 for each small picture frame.
- She paid $5 for each large picture frame.
- She bought a total of 10 picture frames.
- She paid a total of $36 for all the picture frames. There is no sales tax.

What is the number of **large** picture frames that Serena bought?

Write your answer here:

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Directions: For the problem below, use a separate piece of paper to write your answers.
Your teacher will not count anything you write on this page.

7   Mr. Gomez's mathematics test consists of multiple-choice and short-answer questions only.
- Each multiple-choice question is worth 3 points.
- Each short-answer question is worth 5 points.

Let x and y be defined as follows:
- x = the number of multiple-choice questions
- y = the number of short-answer questions

a. The test has a total of 30 questions. Write an equation in terms of x and y that represents this fact.

b. Write an expression in terms of x that represents the total point value of all the multiple-choice questions.

c. Write an expression in terms of y that represents the total point value of all the short-answer questions.

d. The test has a total of 100 points. Write an equation in terms of x and y that represents this fact.

e. Use your equations from parts (a) and (d) to determine how many multiple-choice questions **and** how many short-answer questions are on the test. Show your work.