1. Marcus's favorite casserole recipe requires 3 eggs and makes 6 servings. Marcus will modify the recipe by using 5 eggs and increasing all other ingredients in the recipe proportionally. What is the total number of servings the modified recipe will make?

A. 6
B. 8
C. 10
D. 12
E. 15

2. The 35-member History Club is meeting to choose a student government representative. The members decide that the representative, who will be chosen at random, CANNOT be any of the 3 officers of the club. What is the probability that Hiroko, who is a member of the club but NOT an officer, will be chosen?

F. 0
G. $\frac{4}{35}$
H. $\frac{1}{35}$
J. $\frac{1}{3}$
K. $\frac{1}{32}$

3. For what value of x is the equation $2^{2x+7} = 2^{15}$ true?

A. 2
B. 4
C. 11
D. 16
E. 44

4. Let the function f be defined as $f(x) = 5x^2 - 7(4x + 3)$. What is the value of $f(3)$?

F. −18
G. −26
H. −33
J. −60
K. −75

5. A wallet containing 5 five-dollar bills, 7 ten-dollar bills, and 8 twenty-dollar bills is found and returned to its owner. The wallet's owner will reward the finder with 1 bill drawn randomly from the wallet. What is the probability that the bill drawn will be a twenty-dollar bill?

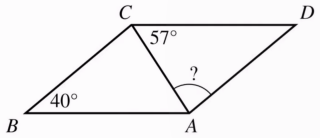
A. $\frac{1}{20}$
B. $\frac{4}{51}$
C. $\frac{1}{8}$
D. $\frac{2}{5}$

6. The ABC Book Club charges a $40 monthly fee, plus $2 per book read in that month. The Easy Book Club charges a $35 monthly fee, plus $3 per book read in that month. For each club, how many books must be read in 1 month for the total charges from each club to be equal?

F. 1
G. 4
H. 5
J. 6
K. 75

7. In parallelogram $ABCD$ below, $\overline{AC}$ is a diagonal, the measure of $\angle ABC$ is 40°, and the measure of $\angle ACD$ is 57°. What is the measure of $\angle CAD$?

A. 40°
B. 57°
C. 77°
D. 83°
E. 97°



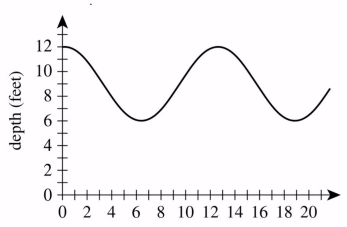
8. When $x = \frac{1}{2}$, what is the value of $\frac{8x-3}{x}$?

F. $\frac{1}{2}$
G. 2
H. $\frac{5}{2}$
J. 5
K. 10

9. In the standard (x,y) coordinate plane, what is the midpoint of the line segment that has endpoints (3,8) and (1,–4) ?

A. (–2,–12)
B. (–1, –6)
C. $\left(\frac{11}{2},-\frac{3}{2}\right)$
D. (2, 2)
E. (4,–12)

10. The fluctuation of water depth at a pier is shown in the figure below. One of the following values gives the positive difference, in feet, between the greatest water depth and the least water depth shown in this graph. Which value is it?



F. 3
G. 6
H. 9
J. 12
K. 19