8 In her catering business, Maria prepares and serves Italian food. The amount of lasagna is prepared according to the following table.

Number of Guests	Pans of Lasagna
10	3
20	6
30	9
40	12

Based on the pattern in the table, how many pans of lasagna should be prepared for 250 guests?

9 Mrs. Sanchez writes the following table of x and y values on the chalkboard and asks the class to find an equation that fits the values in the table.

x	y
–2	–6
0	–2
2	2
4	6

Which of the following equations describes the relationship between x and y?

(A) $y = 2x - 2$

(B) $y = -2x - 2$

(C) $y = 4x + 2$

(D) $y = 4x - 2$

10 Lamar works in the quality control section of a toy company. The factory is producing 3,000 Steel Man action figures. Lamar randomly chose 120 of them and had them examined for defects. Of these 120 figures, eight of them had defects. If this ratio held true for all 3,000 figures, how many additional figures of the remaining 2,880 figures would have defects?

(F) 200

(G) 192

(H) 150

(I) 125

Answers

8 The correct answer is 75. According to the table, there are 3 pans of lasagna for every 10 guests. Let x represent the required number of pans of lasagna for 250 guests. Then $\frac{10}{3}=\frac{250}{x}$. Cross-multiply to get $10x = 750$. Thus, $x=\frac{750}{10} = 75$.

9 **(A)**

For the equation $y=mx+b$, the slope is represented by m and the y-intercept is represented by b. Use the first two pairs of points, (–2, –6) and (0, –2). Then $m=\frac{-2-(-6)}{0-(-2)}=\frac{4}{2}=2$. By definition, the value of b is given by the y-coordinate in the ordered pair (0, –2), which is – 2. Thus, the required equation is $y = 2x – 2$.

10 **(G)**

Let x represent the expected number of figures with defects out of the total of 3,000 figures. Then $\frac{8}{120}=\frac{x}{3,000}$. Cross-multiply to get $120x = 24,000$. So, $x = \frac{24,000}{120}=200$. This means that 200 – 8 = 192 additional figures will have defects.