

Systems of Equations I - Answers

A1.  $y = 2x^2 + 3x - 4$   
 A2.  $y = -0.004x^2 + 0.367x + 5$

B1. A produces 75 suitcases  
 B produces 84 suitcases  
 C produces 63 suitcases.

B2. First number is 16  
 second number is 19  
 and third number is 22.

B3. Cheeseburgers are \$0.69  
 drinks are \$0.99  
 and fries are \$0.79.

B4. First number is 8  
 second number is 21  
 and third number is -3

B5. Measure of angle A is  $34^\circ$ ,  
 measure of angle B is  $104^\circ$  and  
 measure of angle C is  $42^\circ$

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B6. On Monday, 20 quarts were picked,  
 on Tuesday 35 quarts were picked  
 and on Wednesday 32 quarts were picked.

B7. First number is 12,  
 second number is 15  
 and third number is 18.

B8. 45 nickels, 56 dimes and 35 quarters.

B9. Smallest piece of pipe is 6 feet long,  
 medium piece is 16 feet long  
 and the longest piece is 18 feet long.

B10. 4 touchdowns, 3 extra points, 4 field goals

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A2)  $ax^2 + bx + c = y$

①  $a(0)^2 + b(0) + c = 5$   
 ②  $a(15)^2 + b(15) + c = 9.6$   
 ③  $a(30)^2 + b(30) + c = 12.4$

$$\begin{bmatrix} 0 & 0 & 1 \\ 225 & 15 & 1 \\ 900 & 30 & 1 \end{bmatrix} \begin{bmatrix} a \\ b \\ c \end{bmatrix} = \begin{bmatrix} 5 \\ 9.6 \\ 12.4 \end{bmatrix}$$

A2

B6)  $M + T + W = 87$   
 $-M + T + 0W = 15$  (+M)  
 $0M - T + W = -3$  (+T)

B6

B7)  $x + y + z = 45$   
 $x + y - z = +9$  (+z)  
 $x - 2y + z = 24$  (0)

B7

B8)  $0.05n + 0.1d + 0.25q = 16.60$   
 $n + d - 3q = -4$  (+3q)  
 $n + d + q = 136$

B8

B9

$$\begin{aligned} a + b + c &= 40 \\ -3a + 0b + c &= 3a \quad 0 \\ 0a + b - 1c &= \textcircled{c} - 2 \end{aligned}$$

B9

B10

$$\begin{aligned} t + k + f &= 11 \\ 6t + 1k + 3f &= 39 \\ t + 0k - f &= 0 \quad \textcircled{f} \end{aligned}$$

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