

**A.A.25: Solving Equations with Decimals: Solve equations involving fractional expressions. Note: Expressions which result in linear equations in one variable.**

- 1 If  $0.02x + 0.7 = 0.8$ , then  $x$  is equal to
  - 1) 0.5
  - 2) 2
  - 3) 5
  - 4) 50
- 2 What is the value of  $w$  in the equation  $0.04w + 0.6 = 2.4$ ?
  - 1) 0.045
  - 2) 0.45
  - 3) 4.5
  - 4) 45
- 3 What is the value of  $n$  in the equation  $0.6(n + 10) = 3.6$ ?
  - 1) -0.4
  - 2) 5
  - 3) -4
  - 4) 4
- 4 What is the value of  $n$  in the equation  $0.2(n - 6) = 2.8$ ?
  - 1) 8
  - 2) 2
  - 3) 20
  - 4) 44
- 5 The value of  $y$  in the equation  $0.06y + 200 = 0.03y + 350$  is
  - 1) 500
  - 2)  $1,666.\overline{6}$
  - 3) 5,000
  - 4)  $18,333.\overline{3}$
- 6 Solve for  $m$ :  $0.6m + 3 = 2m + 0.2$
- 7 Solve for  $x$ :  $0.35x + 0.6 = 0.1x + 1$
- 8 Solve for  $x$ :  $2(x - 3) = 1.2 - x$
- 9 Solve for  $x$ :  $3.3 - x = 3(x - 1.7)$
- 10 A candy store sells 8-pound bags of mixed hazelnuts and cashews. If  $c$  pounds of cashews are in a bag, the price  $p$  of the bag can be found using the formula  $p = 2.59c + 1.72(8 - c)$ . If one bag is priced at \$18.11, how many pounds of cashews does it contain?

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**Answer Section**

1 ANS: 3  
 $0.02x + 0.7 = 0.8$   
 $0.02x = 0.1$   
 $x = \frac{0.1}{0.02}$   
 $x = 5$

REF: 010906a

2 ANS: 4  
 $0.04w + 0.6 = 2.4$   
 $0.04w = 1.8$   
 $w = 45$

REF: 060804a

3 ANS: 3  
 $0.6(n + 10) = 3.6$   
 $.6n + 6 = 3.6$   
 $.6n = -2.4$   
 $n = -4$

REF: 080406a

4 ANS: 3  
 $0.2(n - 6) = 2.8$   
 $n - 6 = 14$   
 $n = 20$

REF: 011502ia

5 ANS: 3  
 $0.06y + 200 = 0.03y + 350$   
 $0.03y = 150$   
 $y = 5,000$

REF: 081203ia

6 ANS:  
 $0.6m + 3 = 2m + 0.2$   
 $2.8 = 1.4m$   
 $m = 2$

REF: 060323a

7 ANS:

$$0.35x + 0.6 = 0.1x + 1$$

$$1.6. \quad 0.25x = 0.4$$

$$x = 1.6$$

REF: 080831a

8 ANS:

$$2(x - 3) = 1.2 - x$$

$$2.4. \quad 2x - 6 = 1.2 - x$$

$$3x = 7.2$$

$$x = 2.4$$

REF: 089921a

9 ANS:

$$3.3 - x = 3(x - 1.7)$$

$$2.1. \quad 3.3 - x = 3x - 5.1$$

$$8.4 = 4x$$

$$x = 2.1$$

REF: 060634a

10 ANS:

$$p = 2.59c + 1.72(8 - c)$$

$$5. \quad 18.11 = 2.59c + 13.76 - 1.72c$$

$$4.35 = .87c$$

$$c = 5$$

REF: 010635a