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   Solve for m: $0.6m + 3 = 2m + 0.2$

5   Solve for x: $0.35x + 0.6 = 0.1x + 1$

6   Solve for x: $2(x - 3) = 1.2 - x$

7   Solve for x: $3.3 - x = 3(x - 1.7)$

8   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
$$0.02x + 0.7 = 0.8$$
$$0.02x = 0.1$$
$$x = \frac{0.1}{0.02}$$
$$x = 5$$

   PTS: 2   REF: 010906a
2 ANS: 4
$$0.04w + 0.6 = 2.4$$
$$0.04w = 1.8$$
$$w = 45$$

   PTS: 2   REF: 060804a
3 ANS: 3
$$0.6(n + 10) = 3.6$$
$$.6n + 6 = 3.6$$
$$.6n = -2.4$$
$$n = -4$$

   PTS: 2   REF: 080406a
4 ANS:
$$0.6m + 3 = 2m + 0.2$$
2. $$2.8 = 1.4m$$
$$m = 2$$

   PTS: 2   REF: 060323a
5 ANS:
$$0.35x + 0.6 = 0.1x + 1$$
1.6. $$0.25x = 0.4$$
$$x = 1.6$$

   PTS: 2   REF: 080831a

6 ANS:

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

2.4.
$$\begin{aligned} 2x - 6 &= 1.2 - x \\ 3x &= 7.2 \\ x &= 2.4 \end{aligned}$$

PTS: 2   REF: 089921a

7 ANS:

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

2.1.
$$\begin{aligned} 3.3 - x &= 3x - 5.1 \\ 8.4 &= 4x \\ x &= 2.1 \end{aligned}$$

PTS: 2   REF: 060634a

8 ANS:

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

5.
$$\begin{aligned} 18.11 &= 2.59c + 13.76 - 1.72c \\ 4.35 &= .87c \\ c &= 5 \end{aligned}$$

PTS: 2   REF: 010635a