

A.REI.B.3: Solving Linear Equations 3b

- 1 If $0.02x + 0.7 = 0.8$, then x is equal to
- 2 What is the value of w in the equation $0.04w + 0.6 = 2.4$?
- 3 The value of y in the equation $0.06y + 200 = 0.03y + 350$ is
- 4 What is the value of n in the equation $0.2(n - 6) = 2.8$?
- 5 What is the value of n in the equation $0.6(n + 10) = 3.6$?
- 6 Solve for x : $0.35x + 0.6 = 0.1x + 1$
- 7 Solve for m : $0.6m + 3 = 2m + 0.2$
- 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?
- 11 What is the solution of $\frac{k+4}{2} = \frac{k+9}{3}$?
- 12 Which value of x is the solution of $\frac{2x}{5} + \frac{1}{3} = \frac{7x-2}{15}$?
- 13 Which value of x is the solution of the equation $\frac{2x}{3} + \frac{x}{6} = 5$?
- 14 Solve for x : $\frac{3}{5}(x + 2) = x - 4$
- 15 Which value of x is the solution of $\frac{x}{3} + \frac{x+1}{2} = x$?
- 16 Which value of x is the solution of the equation $\frac{2}{3}x + \frac{1}{2} = \frac{5}{6}$?
- 17 Which value of x is the solution of the equation $\frac{1}{7} + \frac{2x}{3} = \frac{15x-3}{21}$?
- 18 What is the value of x in the equation $\frac{3}{4}x + 2 = \frac{5}{4}x - 6$?
- 19 What is the solution set of the equation $\frac{x}{5} + \frac{x}{2} = 14$?
- 20 What is the value of w in the equation $\frac{3}{4}w + 8 = \frac{1}{3}w - 7$?
- 21 What is the value of x in the equation $\frac{x}{2} + \frac{x}{6} = 2$?
- 22 What is the value of w in the equation $\frac{1}{2}w + 7 = 2w - 2$?
- 23 In the equation $\frac{1}{4}n + 5 = 5\frac{1}{2}$, n is equal to
- 24 The number of people on the school board is represented by x . Two subcommittees with an equal number of members are formed, one with $\frac{2}{3}x - 5$ members and the other with $\frac{x}{4}$ members. How many people are on the school board?
- 25 Solve for x : $\frac{1}{16}x + \frac{1}{4} = \frac{1}{2}$
- 26 Solve for m : $\frac{m}{5} + \frac{3(m-1)}{2} = 2(m-3)$

A.REI.B.3: Solving Linear Equations 3b**Answer Section**

1 ANS:

$$\begin{array}{l} 5 \\ 0.02x + 0.7 = 0.8 \end{array}$$

$$0.02x = 0.1$$

$$x = \frac{0.1}{0.02}$$

$$x = 5$$

REF: 010906a

2 ANS:

$$\begin{array}{l} 45 \\ 0.04w + 0.6 = 2.4 \end{array}$$

$$0.04w = 1.8$$

$$w = 45$$

REF: 060804a

3 ANS:

$$\begin{array}{l} 5,000 \\ 0.06y + 200 = 0.03y + 350 \end{array}$$

$$0.03y = 150$$

$$y = 5,000$$

REF: 081203ia

4 ANS:

$$\begin{array}{l} 20 \\ 0.2(n - 6) = 2.8 \end{array}$$

$$n - 6 = 14$$

$$n = 20$$

REF: 011502ia

5 ANS:

$$\begin{array}{l} -4 \\ 0.6(n + 10) = 3.6 \end{array}$$

$$.6n + 6 = 3.6$$

$$.6n = -2.4$$

$$n = -4$$

REF: 080406a

6 ANS:

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

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

$$x = 1.6$$

REF: 080831a

7 ANS:

$$0.6m + 3 = 2m + 0.2$$

$$2. \quad 2.8 = 1.4m$$

$$m = 2$$

REF: 060323a

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:

$$3.3 - x = 3(x - 17)$$

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

$$8.4 = 4x$$

$$x = 2.1$$

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

11 ANS:

6

$$\frac{k+4}{2} = \frac{k+9}{3}$$

$$3(k+4) = 2(k+9)$$

$$3k + 12 = 2k + 18$$

$$k = 6$$

REF: 010906ia

12 ANS:

7

$$\frac{2x}{5} + \frac{1}{3} = \frac{7x-2}{15}$$

$$\frac{(2x \times 3) + (5 \times 1)}{5 \times 3} = \frac{7x-2}{15}$$

$$\frac{6x+5}{15} = \frac{7x-2}{15}$$

$$6x+5 = 7x-2$$

$$x = 7$$

REF: 080820ia

13 ANS:

6

$$\frac{(2x \times 6) + (3 \times x)}{3 \times 6} = 5$$

$$\frac{12x+3x}{18} = 5$$

$$15x = 90$$

$$x = 6$$

REF: 060907ia

14 ANS:

13

$$\frac{3}{5}(x+2) = x-4$$

$$3(x+2) = 5(x-4)$$

$$3x+6 = 5x-20$$

$$26 = 2x$$

$$x = 13$$

REF: 080909ia

15 ANS:

3

$$\frac{x}{3} + \frac{x+1}{2} = x$$

$$\frac{2x+3(x+1)}{6} = x$$

$$5x+3 = 6x$$

$$3 = x$$

REF: 061019ia

16 ANS:

$$\frac{1}{2}$$

$$\frac{2x}{3} + \frac{1}{2} = \frac{5}{6}$$

$$\frac{2x}{3} = \frac{1}{3}$$

$$6x = 3$$

$$x = \frac{1}{2}$$

REF: 011112ia

17 ANS:

$$6$$

$$\frac{1}{7} + \frac{2x}{3} = \frac{15x-3}{21}$$

$$\frac{14x+3}{21} = \frac{15x-3}{21}$$

$$14x+3 = 15x-3$$

$$x = 6$$

REF: 011328ia

18 ANS:

$$16$$

$$\frac{3}{4}x + 2 = \frac{5}{4}x - 6$$

$$8 = \frac{2}{4}x$$

$$x = 16$$

REF: 010204a

19 ANS:

$$\{20\}$$

$$\frac{2x+5x}{10} = 14$$

$$7x = 140$$

$$x = 20$$

REF: 010507a

20 ANS:

 -36

$$\frac{3}{4}w + 8 = \frac{1}{3}w - 7$$

$$\frac{5}{12}x = -15$$

$$5x = -180$$

$$x = -36$$

REF: 080620a

21 ANS:

 3

$$\frac{6x + 2x}{12} = 2$$

$$8x = 24$$

$$x = 3$$

REF: 010719a

22 ANS:

 6

$$\frac{1}{2}w + 7 = 2w - 2$$

$$\frac{3}{2}w = 9$$

$$w = 6$$

REF: 060704a

23 ANS:

 2

$$\frac{1}{4}n + 5 = 5\frac{1}{2}$$

$$\frac{1}{4}n = \frac{1}{2}$$

$$n = 2$$

REF: 080708a

24 ANS:

12

$$\frac{2}{3}x - 5 = \frac{x}{4}$$

$$\frac{5}{12}x = 5$$

$$5x = 60$$

$$x = 12$$

REF: 060418a

25 ANS:

$$\frac{1}{16}x = \frac{1}{4}$$

$$x = 4$$

REF: 010636a

26 ANS:

$$\frac{m}{5} + \frac{3(m-1)}{2} = 2(m-3)$$

$$\frac{2m}{10} + \frac{15(m-1)}{10} = 2m - 6$$

$$\frac{17m-15}{10} = 2m-6$$

$$17m-15 = 20m-60$$

$$45 = 3m$$

$$15 = m$$

REF: 081139ia