

A.REI.B.3: Solving Linear Equations 4

- 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 The value of y in the equation $0.06y + 200 = 0.03y + 350$ is
 - 1) 500
 - 2) $1,666.\bar{6}$
 - 3) 5,000
 - 4) $18,333.\bar{3}$
- 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 What is the value of n in the equation $0.6(n + 10) = 3.6$?
 - 1) -0.4
 - 2) 5
 - 3) -4
 - 4) 4
- 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 $\frac{k+4}{2} = \frac{k+9}{3}$?
 - 1) 1
 - 2) 5
 - 3) 6
 - 4) 14
- 12 Which value of x is the solution of $\frac{2x}{5} + \frac{1}{3} = \frac{7x-2}{15}$?
 - 1) $\frac{3}{5}$
 - 2) $\frac{31}{26}$
 - 3) 3
 - 4) 7
- 13 Which value of x is the solution of the equation $\frac{2x}{3} + \frac{x}{6} = 5$?
 - 1) 6
 - 2) 10
 - 3) 15
 - 4) 30
- 14 Solve for x : $\frac{3}{5}(x + 2) = x - 4$
 - 1) 8
 - 2) 13
 - 3) 15
 - 4) 23
- 15 Which value of x is the solution of $\frac{x}{3} + \frac{x+1}{2} = x$?
 - 1) 1
 - 2) -1
 - 3) 3
 - 4) -3

- 16 Which value of x is the solution of the equation

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

- 1) $\frac{1}{2}$
- 2) 2
- 3) $\frac{2}{3}$
- 4) $\frac{3}{2}$

- 17 Which value of x is the solution of the equation

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

- 1) 6
- 2) 0
- 3) $\frac{4}{13}$
- 4) $\frac{6}{29}$

- 18 What is the value of x in the equation

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

- 1) -16
- 2) 16
- 3) -4
- 4) 4

- 19 What is the solution set of the equation

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

- 1) {4}
- 2) {10}
- 3) {20}
- 4) {49}

- 20 What is the value of w in the equation

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

- 1) 2.4
- 2) -0.2
- 3) -13.846
- 4) -36

- 21 What is the value of x in the equation $\frac{x}{2} + \frac{x}{6} = 2$?

- 1) 12
- 2) 8
- 3) 3
- 4) $\frac{1}{4}$

- 22 What is the value of w in the equation

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

- 1) 6
- 2) 2
- 3) $3\frac{1}{3}$
- 4) 3.6

- 23 In the equation $\frac{1}{4}n + 5 = 5\frac{1}{2}$, n is equal to

- 1) 8
- 2) 2
- 3) $\frac{1}{2}$
- 4) $\frac{1}{8}$

- 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?

- 1) 20
- 2) 12
- 3) 8
- 4) 4

- 25 Solve for x : $\frac{1}{16}x + \frac{1}{4} = \frac{1}{2}$

- 26 Solve for m : $\frac{m}{5} + \frac{3(m-1)}{2} = 2(m-3)$

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

REF: 081203ia

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

REF: 011502ia

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

REF: 080406a

6 ANS:
 $0.35x + 0.6 = 0.1x + 1$
1.6. $0.25x = 0.4$
 $x = 1.6$

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:

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

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

$$8.4 = 4x$$

$$x = 2.1$$

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

11 ANS: 3

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

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

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

$$k = 6$$

REF: 010906ia

12 ANS: 4

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

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

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

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

$$x = 7$$

REF: 080820ia

13 ANS: 1

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

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

$$15x = 90$$

$$x = 6$$

REF: 060907ia

14 ANS: 2

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

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

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

$$26 = 2x$$

$$x = 13$$

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: 1

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

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

$$6x = 3$$

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

REF: 011112ia

17 ANS: 1

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

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

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

$$x = 6$$

REF: 011328ia

18 ANS: 2

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

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

$$x = 16$$

REF: 010204a

19 ANS: 3

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

$$7x = 140$$

$$x = 20$$

REF: 010507a

20 ANS: 4

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

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

$$5x = -180$$

$$x = -36$$

REF: 080620a

21 ANS: 3

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

$$8x = 24$$

$$x = 3$$

REF: 010719a

22 ANS: 1

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

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

$$w = 6$$

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: 2

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

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

$$5x = 60$$

$$x = 12$$

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