

A.A.22: Solving Equations 1: Solve all types of linear equations in one variable

- 1 Which value of p is the solution of $5p - 1 = 2p + 20$?
 - 1) $\frac{19}{7}$
 - 2) $\frac{19}{3}$
 - 3) 3
 - 4) 7
- 2 The solution of the equation $5 - 2x = -4x - 7$ is
 - 1) 1
 - 2) 2
 - 3) -2
 - 4) -6
- 3 Which value of x is the solution of the equation $2(x - 4) + 7 = 3$?
 - 1) 1
 - 2) 2
 - 3) 6
 - 4) 0
- 4 What is the value of x in the equation $2(x - 4) = 4(2x + 1)$?
 - 1) -2
 - 2) 2
 - 3) $-\frac{1}{2}$
 - 4) $\frac{1}{2}$
- 5 If $12x = 4(x + 5)$, then x equals
 - 1) $\frac{1}{12}$
 - 2) $\frac{5}{8}$
 - 3) 1.25
 - 4) 2.5
- 6 Solve for x : $15x - 3(3x + 4) = 6$
 - 1) 1
 - 2) $-\frac{1}{2}$
 - 3) 3
 - 4) $\frac{1}{3}$
- 7 What is the solution of the equation $3y - 5y + 10 = 36$?
 - 1) -13
 - 2) 2
 - 3) 4.5
 - 4) 13
- 8 If $2x + 5 = -25$ and $-3m - 6 = 48$, what is the product of x and m ?
 - 1) -270
 - 2) -33
 - 3) 3
 - 4) 270
- 9 If $2(x + 3) = x + 10$, then x equals
 - 1) 14
 - 2) 7
 - 3) 5
 - 4) 4
- 10 If $3(x - 2) = 2x + 6$, the value of x is
 - 1) 0
 - 2) 5
 - 3) 12
 - 4) 20
- 11 What is the value of x in the equation $2(x - 3) + 1 = 19$?
 - 1) 6
 - 2) 9
 - 3) 10.5
 - 4) 12
- 12 What is the solution for the equation $x + 1 = x + 2$?
 - 1) -1
 - 2) $\frac{1}{2}$
 - 3) all real numbers
 - 4) There is no solution.
- 13 If $-2x + 3 = 7$ and $3x + 1 = 5 + y$, the value of y is
 - 1) 1
 - 2) 0
 - 3) -10
 - 4) 10

- 14 What is the value of x in the equation $5(2x - 7) = 15x - 10$?

1) 1
2) 0.6
3) -5
4) -9

- 15 What is the value of x in the equation $13x - 2(x + 4) = 8x + 1$?

1) 1
2) 2
3) 3
4) 4

- 16 What is the value of p in the equation $2(3p - 4) = 10$?

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

- 17 What is the value of n in the equation $3n - 8 = 32 - n$?

1) -10
2) -6
3) 6
4) 10

- 18 What is the value of x in the equation $6(x - 2) = 36 - 10x$?

1) -6
2) 1.5
3) 3
4) 6

- 19 What is the value of p in the equation $8p + 2 = 4p - 10$?

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

- 20 What is the value of x in the equation $5 - 3x = -7$?

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

- 21 If $3(x + 2) - 2(x + 1) = 8$, the value of x is

1) 1
2) $\frac{1}{5}$
3) 5
4) 4

- 22 What is the value of m in the equation $2m - (m + 1) = 0$?

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

- 23 Debbie solved the linear equation $3(x + 4) - 2 = 16$ as follows:

[Line 1] $3(x + 4) - 2 = 16$

[Line 2] $3(x + 4) = 18$

[Line 3] $3x + 4 = 18$

[Line 4] $3x = 14$

[Line 5] $x = 4\frac{2}{3}$

She made an error between lines

1) 1 and 2
2) 2 and 3
3) 3 and 4
4) 4 and 5

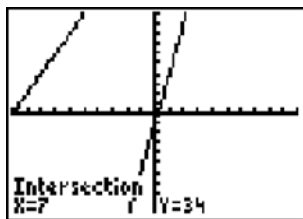
- 24 Solve for x : $5(x - 2) = 2(10 + x)$

- 25 Solve for g : $3 + 2g = 5g - 9$

- 26 Solve algebraically for x :
 $3(x + 1) - 5x = 12 - (6x - 7)$

A.A.22: Solving Equations 1: Solve all types of linear equations in one variable**Answer Section**

1 ANS: 4



$$5p - 1 = 2p + 20$$

$$3p = 21$$

$$p = 7$$

REF: 080801ia

2 ANS: 4

$$5 - 2x = -4x - 7$$

$$2x = -12$$

$$x = -6$$

REF: 011305ia

3 ANS: 2

$$2(x - 4) + 7 = 3$$

$$2x - 8 = -4$$

$$2x = 4$$

$$x = 2$$

REF: 061425ia

4 ANS: 1

$$2(x - 4) = 4(2x + 1)$$

$$2x - 8 = 8x + 4$$

$$-12 = 6x$$

$$-2 = x$$

REF: 011106ia

5 ANS: 4

$$12x = 4(x + 5)$$

$$12x = 4x + 20$$

$$8x = 20$$

$$x = \frac{20}{8} = 2.5$$

REF: spring9802a

6 ANS: 3

$$15x - 3(3x + 4) = 6$$

$$15x - 9x - 12 = 6$$

$$6x = 18$$

$$x = 3$$

REF: 080015a

7 ANS: 1

$$3y - 5y + 10 = 36$$

$$-2y = 26$$

$$y = -13$$

REF: 060214a

8 ANS: 4

$$2x + 5 = -25 \quad -3m - 6 = 48$$

$$2x = -30 \quad -3m = 54 \quad \text{The product of } x \text{ and } m \text{ is } 270.$$

$$x = -15 \quad m = -18$$

REF: 080219a

9 ANS: 4

$$2(x + 3) = x + 10$$

$$2x + 6 = x + 10$$

$$x = 4$$

REF: 010401a

10 ANS: 3

$$3(x - 2) = 2x + 6$$

$$3x - 6 = 2x + 6$$

$$x = 12$$

REF: 060404a

11 ANS: 4

$$2(x - 3) + 1 = 19$$

$$2x - 6 = 18$$

$$2x = 24$$

$$x = 12$$

REF: 010904a

12 ANS: 4

$$x + 1 = x + 2$$

$$1 \neq 2$$

REF: 010908a

13 ANS: 3

$$-2x + 3 = 7 \quad 3(-2) + 1 = 5 + y$$

$$-2x = 4 \quad -5 = 5 + y$$

$$x = -2 \quad y = -10$$

REF: 060519a

14 ANS: 3

$$5(2x - 7) = 15x - 10$$

$$10x - 35 = 15x - 10$$

$$-25 = 5x$$

$$x = -5$$

REF: 010601a

15 ANS: 3

$$13x - 2(x + 4) = 8x + 1$$

$$13x - 2x - 8 = 8x + 1$$

$$11x = 8x + 9$$

$$3x = 9$$

$$x = 3$$

REF: 060602a

16 ANS: 3

$$2(3p - 4) = 10$$

$$6p - 8 = 10$$

$$6p = 18$$

$$p = 3$$

REF: 080602a

17 ANS: 4

$$3n - 8 = 32 - n$$

$$4n = 40$$

$$n = 10$$

REF: 010705a

18 ANS: 3

$$6(x-2) = 36 - 10x$$

$$6x - 12 = 36 - 10x$$

$$16x = 48$$

$$x = 3$$

REF: 060702a

19 ANS: 4

$$8p + 2 = 4p - 10$$

$$4p = -12$$

$$p = -3$$

REF: 010807a

20 ANS: 4

$$5 - 3x = -7$$

$$-3x = -12$$

$$x = 4$$

REF: 060810a

21 ANS: 4

$$3(x+2) - 2(x+1) = 8$$

$$3x + 6 - 2x - 2 = 8$$

$$x + 4 = 8$$

$$x = 4$$

REF: 060813a

22 ANS: 1

$$2m - (m+1) = 0$$

$$2m - m - 1 = 0$$

$$m = 1$$

REF: 080812a

23 ANS: 2

Debbie failed to distribute the 3 properly.

REF: 011009ia

24 ANS:

$$5(x-2) = 2(10+x)$$

$$5x - 10 = 20 + 2x$$

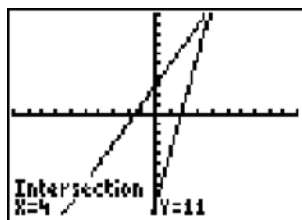
10.

$$3x = 30$$

$$x = 10$$

REF: 080731a

25 ANS:



$$4. \ 3 + 2g = 5g - 9$$

$$12 = 3g$$

$$g = 4$$

REF: fall0732ia

26 ANS:

$$4. \ 3(x + 1) - 5x = 12 - (6x - 7)$$

$$3x + 3 - 5x = 12 - 6x + 7$$

$$-2x + 3 = -6x + 19$$

$$4x = 16$$

$$x = 4$$

REF: 061238ia