

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 What is the value of x in the equation $2(x - 4) = 4(2x + 1)$?
 - 1) -2
 - 2) 2
 - 3) $-\frac{1}{2}$
 - 4) $\frac{1}{2}$
- 3 If $12x = 4(x + 5)$, then x equals
 - 1) $\frac{1}{12}$
 - 2) $\frac{5}{8}$
 - 3) 1.25
 - 4) 2.5
- 4 Solve for x : $15x - 3(3x + 4) = 6$
 - 1) 1
 - 2) $-\frac{1}{2}$
 - 3) 3
 - 4) $\frac{1}{3}$
- 5 What is the solution of the equation $3y - 5y + 10 = 36$?
 - 1) -13
 - 2) 2
 - 3) 4.5
 - 4) 13
- 6 If $2x + 5 = -25$ and $-3m - 6 = 48$, what is the product of x and m ?
 - 1) -270
 - 2) -33
 - 3) 3
 - 4) 270
- 7 If $2(x + 3) = x + 10$, then x equals
 - 1) 14
 - 2) 7
 - 3) 5
 - 4) 4
- 8 If $3(x - 2) = 2x + 6$, the value of x is
 - 1) 0
 - 2) 5
 - 3) 12
 - 4) 20
- 9 What is the value of x in the equation $2(x - 3) + 1 = 19$?
 - 1) 6
 - 2) 9
 - 3) 10.5
 - 4) 12
- 10 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.
- 11 If $-2x + 3 = 7$ and $3x + 1 = 5 + y$, the value of y is
 - 1) 1
 - 2) 0
 - 3) -10
 - 4) 10
- 12 What is the value of x in the equation $5(2x - 7) = 15x - 10$?
 - 1) 1
 - 2) 0.6
 - 3) -5
 - 4) -9

- 13 What is the value of x in the equation $13x - 2(x + 4) = 8x + 1$?
- 1) 1
 - 2) 2
 - 3) 3
 - 4) 4
- 14 What is the value of p in the equation $2(3p - 4) = 10$?
- 1) 1
 - 2) $2\frac{1}{3}$
 - 3) 3
 - 4) $\frac{1}{3}$
- 15 What is the value of n in the equation $3n - 8 = 32 - n$?
- 1) -10
 - 2) -6
 - 3) 6
 - 4) 10
- 16 What is the value of x in the equation $6(x - 2) = 36 - 10x$?
- 1) -6
 - 2) 1.5
 - 3) 3
 - 4) 6
- 17 What is the value of p in the equation $8p + 2 = 4p - 10$?
- 1) 1
 - 2) -1
 - 3) 3
 - 4) -3
- 18 What is the value of x in the equation $5 - 3x = -7$?
- 1) $-\frac{2}{3}$
 - 2) $\frac{2}{3}$
 - 3) -4
 - 4) 4

- 19 If $3(x + 2) - 2(x + 1) = 8$, the value of x is
- 1) 1
 - 2) $\frac{1}{5}$
 - 3) 5
 - 4) 4
- 20 What is the value of m in the equation $2m - (m + 1) = 0$?
- 1) 1
 - 2) -1
 - 3) $\frac{1}{3}$
 - 4) 0
- 21 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] $x = 4\frac{2}{3}$

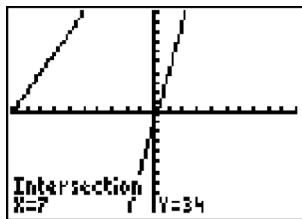
She made an error between lines

- 1) 1 and 2
 - 2) 2 and 3
 - 3) 3 and 4
 - 4) 4 and 5
- 22 Solve for x : $5(x - 2) = 2(10 + x)$
- 23 Solve for g : $3 + 2g = 5g - 9$

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: 1

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

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

$$-12 = 6x$$

$$-2 = x$$

REF: 011106ia

3 ANS: 4

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

$$12x = 4x + 20$$

$$8x = 20$$

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

REF: spring9802a

4 ANS: 3

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

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

$$6x = 18$$

$$x = 3$$

REF: 080015a

5 ANS: 1

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

$$-2y = 26$$

$$y = -13$$

REF: 060214a

6 ANS: 4

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

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

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

REF: 080219a

7 ANS: 4

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

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

$$x = 4$$

REF: 010401a

8 ANS: 3

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

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

$$x = 12$$

REF: 060404a

9 ANS: 4

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

$$2x-6 = 18$$

$$2x = 24$$

$$x = 12$$

REF: 010904a

10 ANS: 4

$$x+1 = x+2$$

$$1 \neq 2$$

REF: 010908a

11 ANS: 3

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

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

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

REF: 060519a

12 ANS: 3
 $5(2x - 7) = 15x - 10$
 $10x - 35 = 15x - 10$
 $-25 = 5x$
 $x = -5$

REF: 010601a

13 ANS: 3
 $13x - 2(x + 4) = 8x + 1$
 $13x - 2x - 8 = 8x + 1$
 $11x = 8x + 9$
 $3x = 9$
 $x = 3$

REF: 060602a

14 ANS: 3
 $2(3p - 4) = 10$
 $6p - 8 = 10$
 $6p = 18$
 $p = 3$

REF: 080602a

15 ANS: 4
 $3n - 8 = 32 - n$
 $4n = 40$
 $n = 10$

REF: 010705a

16 ANS: 3
 $6(x - 2) = 36 - 10x$
 $6x - 12 = 36 - 10x$
 $16x = 48$
 $x = 3$

REF: 060702a

17 ANS: 4
 $8p + 2 = 4p - 10$
 $4p = -12$
 $p = -3$

REF: 010807a

18 ANS: 4
 $5 - 3x = -7$
 $-3x = -12$
 $x = 4$

REF: 060810a

19 ANS: 4
 $3(x + 2) - 2(x + 1) = 8$
 $3x + 6 - 2x - 2 = 8$
 $x + 4 = 8$
 $x = 4$

REF: 060813a

20 ANS: 1
 $2m - (m + 1) = 0$
 $2m - m - 1 = 0$
 $m = 1$

REF: 080812a

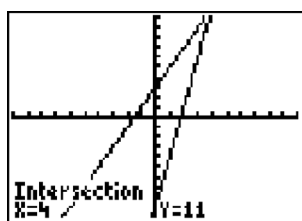
21 ANS: 2
 Debbie failed to distribute the 3 properly.

REF: 011009ia

22 ANS:
 $5(x - 2) = 2(10 + x)$
 $5x - 10 = 20 + 2x$
 10. $3x = 30$
 $x = 10$

REF: 080731a

23 ANS:



4. $3 + 2g = 5g - 9$
 $12 = 3g$
 $g = 4$

REF: fall0732ia