Solving Linear Equations

Solve each equation.

1. n – 20 = 5

   SOLUTION:

   n – 20 = 5

   n – 20 + 20 = 5 + 20

   n = 25

   ANSWER:

   n = 25

2. 104 = y - 67

   SOLUTION:

   104 = y – 67

   104 + 67 = y – 67 + 67

   171 = y

   ANSWER:

   y = 171

3. -4 + t = -7

   SOLUTION:

   -4 + t = -7

   -4 + 4 + t = -7 + 4

   t = -3

   ANSWER:

   t = -3

4. g + 5 = 33

   SOLUTION:

   g + 5 = 33

   g + 5 – 5 = 33 – 5

   g = 28

ANSWER:

g = 28

5. 19 + p = 6

   SOLUTION:

   19 + p = 6

   19 – 19 + p = 6 – 19

   p = -13

   ANSWER:

   p = -13

6. 15 = b – (-65)

   SOLUTION:

   15 = b – (-65)

   15 – 65 = b – (-65) – 65

   b = -50

   ANSWER:

   b = -50

13. v – 9 = 14

   SOLUTION:

   v – 9 = 14

   v – 9 + 9 = 14 + 9

   v = 23

   ANSWER:

   v = 23

14. 44 = t – 72

   SOLUTION:

   44 = t – 72

   44 + 72 = t – 72 + 72

   116 = t

ANSWER:

t = 116

ANSWER:

c = 7

15. -61 = d + (-18)

SOLUTION:

-61 = d + (-18)

-61 + 18 = d + (-18) + 18

d = -43

ANSWER:

d = -43

19. n + 23 = 4

SOLUTION:

n + 23 = 4

n + 23 − 23 = 4 − 23

n = -19

ANSWER:

n = -19

16. p + (-26) = 16

SOLUTION:

p + (-26) = 16

p + (-26) + 26 = 16 + 26

p = 42

ANSWER:

p = 42

20. -67 = 11 + k

SOLUTION:

-67 = 11 + k

-67 − 11 = 11 − 11 + k

-78 = k

ANSWER:

k = -78

17. 18 + z = 40

SOLUTION:

18 + z = 40

18 − 18 + z = 40 − 18

z = 22

ANSWER:

z = 22

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14. $\frac{x}{9} = 10$

SOLUTION:

$\frac{x}{9} = 10$

$\frac{x}{9} * 9 = 10 * 9$

x = 90

ANSWER:

x = 90

18. 19 = c + 12

SOLUTION:

19 = c + 12

19 − 12 = c + 12 − 12

7 = c

15. $\frac{b}{7} = -11$

SOLUTION:

$\frac{b}{7} = -11$

$$\frac{b}{7} * 7 = -11 * 7$$

b = -77

ANSWER:

b = -77

16. $\frac{3}{4} = \frac{c}{24}$

SOLUTION:

$$\frac{3}{4} = \frac{c}{24}$$

$$\frac{3}{4} * 24 = \frac{c}{24} * 24 \qquad \text{The LCD for the fractions is 24}$$

18 = c

ANSWER:

c = 18

17. $\frac{2}{3} = \frac{1}{8}y$

SOLUTION:

$$\frac{2}{3} = \frac{1}{8}y$$

$$\frac{2}{3} * 24 = \frac{1}{8}y * 24 \qquad \text{The LCD for the fractions is 24}$$

16 = y

ANSWER:

y = 16

18. $\frac{2}{3}n = 14$

SOLUTION:

$$\frac{2}{3}n = 14$$

$$\frac{2}{3}n * \frac{3}{2} = 14 * \frac{3}{2} \qquad \frac{3}{2} \text{ undoes the fraction with n}$$

n = 21

ANSWER:

n = 21

19. $\frac{3}{5}g = -6$

SOLUTION:

$$\frac{3}{5}g = -6$$

$$\frac{3}{5}g * \frac{5}{3} = -6 * \frac{5}{3} \qquad \frac{5}{3} \text{ undoes the fraction with g}$$

g = -10

ANSWER:

g = -10