# Solving Linear Equations

1. Solve for r:
25 = 7 + r
r =

2. Solve for p:
2 = -1 + p
p =

3. $12s \leq 4(s - 2)$

Which of the following best describes the solutions to the inequality shown above?

A.  $s \leq -1$

B.  $s \leq -\dfrac{2}{3}$

C.  $s \geq -\dfrac{1}{4}$

D.  $s \geq 8$

4. $4c + 5 < 4c + 3$

Which of the following best describes the solutions to the inequality shown above?

A. All real numbers

B. $c < \dfrac{1}{2}$

C. $c > \dfrac{1}{4}$

D. No solution

5.If $9 \geq 4x + 1$, which inequality represents the possible range of values of $12x + 3$?

A. $12x + 3 \geq 17$
B. $12x + 3 \leq 17$
C. $12x + 3 \geq 27$
D. $12x + 3 \leq 27$

6.If $16 - 7w = w + 14 - 6w$, what is the value of $w - 1$?
A.  $w - 1 = -2$
B.  $w - 1 = 0$
C.  $w - 1 = 1$
D.  $w - 1 = -3$

7.If $\frac{1}{2} + \frac{2}{5}s = s - \frac{3}{4}$ , what is the value of s?

A. $s = \frac{3}{4}$

B. $s = \frac{25}{12}$

C. $s = -\frac{25}{12}$

D. $s = -\frac{3}{4}$

8.$-p + 60 = -h + 10000$

In the equation above, h is a constant.
If p=10 is a solution to the equation,
what is the value of h?

$9.4 + 5m = 4m + 1 + m$

Which of the following best describes the
solution set to the equation shown above?
A. The equation has exactly one solution, m=0.
B. The equation has exactly one solution, m=1.
C. The equation has no solutions.
D. The equation has infinitely many solutions.

10.If $15bx - 20 > 35$, where b is a positive constant, what is the possible range of values of 4−3bx?

A.  Any value less than −7

B.  Any value greater than −7

C.  Any value less than $-\dfrac{11}{3bx}$

D.  Any value greater than $\dfrac{11}{3bx}$

11. $\dfrac{2(4p+1)}{5} \leq \dfrac{3+12p}{4}$

Which of the following best describes the solutions to the inequality shown above?

A. $p \leq -\dfrac{13}{7}$

B. $p \geq -\dfrac{13}{7}$

C. $p \leq -\dfrac{1}{4}$

D. $p \geq -\dfrac{1}{4}$

12. $-4 + bx = 2x + 3(x + 1)$

In the equation shown above, b is a constant.
For what value of b does the equation have
no solutions?

A. 3
B. 4
C. 5
D. 6

13. $\frac{3}{2}q \le \frac{9}{2}q - 18$

Which of the following best describes the solutions to the inequality shown above?

A. $q \le 3$

B. $q \ge 3$

C. $q \le 6$

D. $q \ge 6$

14.If $9 < 15\text{mx} - 8 < 27$, where m is a positive constant, what is the possible range of values of $\frac{8}{3} - 5mx$?

A.  Any value greater than −3 or less than −9

B.  Any value greater than −9 and less than −3

C.  Any value greater than $-\frac{7}{3m}$ or less than $-\frac{17}{15m}$

D.  Any value greater than $-\frac{17}{15m}$ and less than $-\frac{7}{3m}$

15.If $3(r + 300) = 6$, then what is the value of $r + 300 - 2$?

16. $3(t + 1) = -\dfrac{1}{2} - 5t$

Which of the following best describes the solution set to the equation shown above?

A. The equation has no solutions.

B. The equation has exactly one solution, $t = -\dfrac{7}{16}$

C. The equation has exactly one solution, $t = -\dfrac{7}{4}$

D. The equation has infinitely many solutions.

17.If $5 < 2x + 3 < 11$, what is the possible range
of values of $-4x - 6$?
A. Any value greater than−10 or less than −22
B. Any value greater than −22 and less than −10
C. Any value greater than 1 and less than 4
D. Any value greater than 4 or less than 1

18.$4|6 + 2s| - 27 \leq -3$

Which of the following best describes the solutions to the inequality shown above?

A. $-24 \leq s \leq 0$

B. $-6 \leq s \leq 0$

C. $s \leq 0$ or $s \geq 3$

D. No solution

19. $4x + 1 = -ax - 4$

In the equation shown above, a is a constant.
Which of the following values of a results in an
equation with exactly one solution?

A. 4
B. -4
C. Neither value
D. Both values

$20. 4(80 + n) = (3k)n$

In the equation above, k is a constant. For what value of k are there no solutions to the equation?

21. $8 - 9(x + 1) = ax + 4$

In the equation shown above, a is a constant.
Which of the following values of a results in an equation with exactly one solution?

A. 9

B. 8

C. Neither value

D. Both values

22. $2x - 1 = -1 + ax$

In the equation shown above, a is a constant. Which of the following values of a results in an equation with exactly one solution?

A. 2

B. 3

C. Neither value

D. Both values

23. $4 - 3y = 6y + 4 - 9y$

Which of the following best describes the solution set to the equation shown above?

A. The equation has no solutions.

B. The equation has exactly one solution, $y = 0$.

C. The equation has exactly one solution, $y = \frac{4}{3}$.

D. The equation has infinitely many solutions.

# Thanks

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