

**A2.A.1: Absolute Value Equations 3: Solve absolute value equations and inequalities involving linear expressions in one variable**

- 1 Solve for all values of  $x$ :  $|2x - 5| = 3$
- 2 Solve for all values of  $x$ :  $|2x - 5| = 7$
- 3 Solve for all values of  $x$ :  $|3x - 2| = 6$
- 4 Solve for all values of  $x$ :  $|3x - 2| = 16$
- 5 Find the solution set for  $|2x - 1| = 3$ .
- 6 What is the solution set of the equation  $|2x - 1| = 5$ ?
- 7 Solve for all values of  $x$ :  $|2x + 3| = 7$
- 8 Find all values of  $x$  that satisfy the equation  $|2x + 3| = 11$ ?
- 9 Find the solution set of  $|2x + 1| = 9$ .
- 10 Find the complete solution set of  $|2x - 4| = 8$
- 11 Solve for all values of  $x$ :  $|2x + 5| = 4$
- 12 Solve for all values of  $x$ :  $|3x + 5| = 7$

- 13 What is the solution set of the equation  $|2x + 5| - 4 = 3$ ?
- 14 Solve for  $x$ :  $|5 - 2x| = 7$ ?
- 15 Solve for all values of  $x$ :  $|3x - 1| = 5$
- 16 Solve for the negative value of  $x$ :  $|3x - 1| = 19$
- 17 What is the *negative* value of  $x$  that satisfies the equation  $|3x + 1| = 8$ ?
- 18 Find the negative root of the equation  $|3x - 2| = 4$ .
- 19 Find the *negative* member of the solution set for  $|2x - 4| = 6$
- 20 What is the negative root of the equation  $|2x + 3| = 11$ ?
- 21 Solve for the negative value of  $x$ :  $|2x + 5| + 1 = 13$
- 22 Solve for the *negative* value of  $x$ :  $|2x - 3| + 1 = 17$
- 23 Solve for the positive value of  $x$ :  $|2x - 3| = 11$

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#### Answer Section

- 1 ANS:  
1, 4  
  
PTS: 2 REF: 010822b
- 2 ANS:  
-1, 6  
  
PTS: 2 REF: 019404siii
- 3 ANS:  
 $\frac{8}{3}, -\frac{4}{3}$   
  
PTS: 2 REF: 080822b
- 4 ANS:  
 $6, -\frac{14}{3}$   
  
PTS: 2 REF: 089615siii
- 5 ANS:  
{-1, 2}  
  
PTS: 2 REF: 018505siii
- 6 ANS:  
-2, 3  
  
PTS: 2 REF: 080009siii
- 7 ANS:  
-5, 2  
  
PTS: 2 REF: 060009siii
- 8 ANS:  
-7, 4  
  
PTS: 2 REF: 080305siii
- 9 ANS:  
{-5, 4}  
  
PTS: 2 REF: 068413siii
- 10 ANS:  
-2, 6  
  
PTS: 2 REF: 069614siii

11 ANS:

$$-\frac{1}{2}, -\frac{9}{2}$$

PTS: 2

REF: 069908siii

12 ANS:

$$-4, \frac{2}{3}$$

PTS: 2

REF: 060110siii

13 ANS:

$$\{-6, 1\}$$

PTS: 2

REF: 060313siii

14 ANS:

$$-1, 6$$

PTS: 2

REF: 068816siii

15 ANS:

$$2, -\frac{4}{3}$$

PTS: 2

REF: 019007siii

16 ANS:

$$-6$$

PTS: 2

REF: 080101siii

17 ANS:

$$-3$$

PTS: 2

REF: 010301siii

18 ANS:

$$-\frac{2}{3}$$

PTS: 2

REF: 068509siii

19 ANS:

$$-1$$

PTS: 2

REF: 068704siii

20 ANS:

$$-7$$

PTS: 2

REF: 069005siii

21 ANS:

$$-\frac{17}{2}$$

PTS: 2

REF: 080923b

22 ANS:

$$-6\frac{1}{2}$$

PTS: 2

REF: 060214siii

23 ANS:

$$7$$

PTS: 2

REF: 010003siii