



Practice Masters Level B

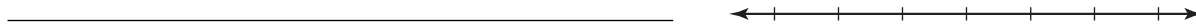
1.8 Solving Absolute-Value Equations and Inequalities

Solve each equation, and graph the solution on the number line.

1. $|2x + 1| = 9$



2. $|5 - 2m| = 7$



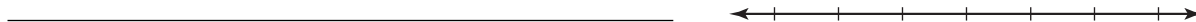
3. $|-t| = 3$



4. $|-x| = 0$



5. $|4x - 7| = 1$



Solve each inequality, and graph the solution on the number line.

6. $|3n + 2| > -2$



7. $|5x - 4| \leq 6$



8. $|1 - 2b| < 5$



9. $\frac{1}{2}|x - 6| - 2 < 2$



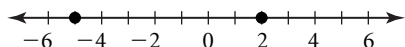
10. $|\frac{4x + 3}{-5}| \geq -3$



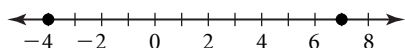
11. A spindle is designed with a specification of a 102-centimeter diameter. The spindle will work if it is within 0.025 centimeters of the specified length. Write an absolute-value inequality to represent the measurement tolerance for the diameter, d . _____

Answers

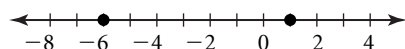
7. $x = 2$ or $x = -5$



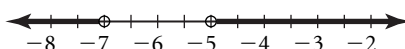
8. $x = 7$ or $x = -4$



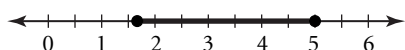
9. $x = 1$ or $x = -6$



10. $x > -5$ or $x < -7$

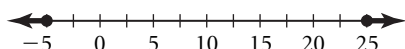


11. $x \leq 5$ and $x \geq \frac{5}{3}$



12. no solution

13. $x \geq 25$ or $x \leq -5$

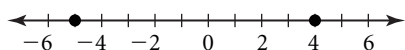


14. $|2x| < 6$

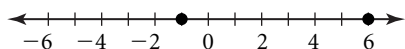
15. $|10y - 12| > 10$

Lesson 1.8 Level B

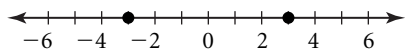
1. $x = 4$ or $x = -5$



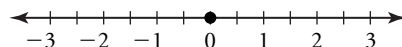
2. $m = 6$ or $m = -1$



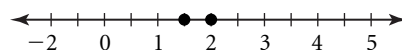
3. $t = 3$ or $t = -3$



4. $x = 0$



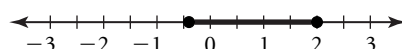
5. $x = 2$ or $x = \frac{3}{2}$



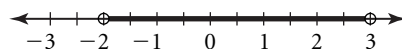
6. all real numbers



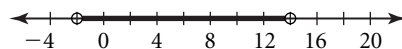
7. $x \leq 2$ and $x \geq \frac{-2}{5}$



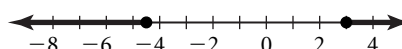
8. $b > -2$ and $b < 3$



9. $x > -2$ and $x < 14$



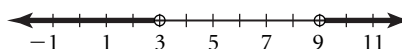
10. $x \geq 3$ or $x \leq \frac{-9}{2}$



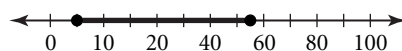
11. $|d - 102| \leq 0.025$

Lesson 1.8 Level C

1. $x < 3$ or $x > 9$

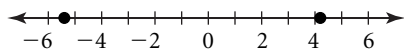


2. $t \geq 5$ and $t \leq 55$

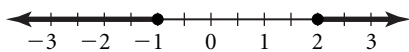


Answers

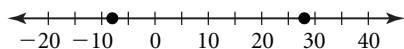
3. $x = \frac{-27}{5}$ or $x = \frac{21}{5}$



4. $m \geq 2$ and $m \leq -1$



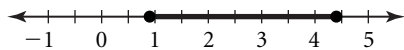
5. $r = -8$ or $r = 28$



6. all real numbers



7. $x \geq 0.9$ and $x \leq 4.4$



8. $148.8 \leq x \leq 164.3$

9. a. $0.75m > 899$

b. 1198.66 minutes; 19.98 hours