

Practice 2

Absolute Value Equations

Solve the absolute value equation or indicate that the equation has no solution.

1) $|x| = 8$ 1) _____
 A) {8} B) {-8} C) {-8, 8} D) {64}

2) $|x + 8| = 3$ 2) _____
 A) {5} B) {11, -5} C) {-11, -5} D) $\emptyset$

3) $|5x + 4| = 7$ 3) _____
 A) $\left\{\frac{3}{4}, -\frac{11}{4}\right\}$ B) $\left\{-\frac{3}{5}, \frac{11}{5}\right\}$ C) $\left\{\frac{3}{5}, -\frac{11}{5}\right\}$ D) $\emptyset$

4) $3|x - 3| = 18$ 4) _____
 A) {3, -9} B) {3} C) {9, -3} D) $\emptyset$

5) $|2x + 5| + 4 = 10$ 5) _____
 A) $\left\{-\frac{11}{5}, \frac{1}{5}\right\}$ B) $\left\{-\frac{1}{2}, \frac{11}{2}\right\}$ C) $\left\{-\frac{11}{2}, \frac{1}{2}\right\}$ D) $\emptyset$

6) $|8x - 1| - 8 = -16$ 6) _____
 A) $\left\{\frac{9}{8}, \frac{7}{8}\right\}$ B) $\left\{-\frac{7}{8}\right\}$ C) $\left\{-\frac{7}{8}, -\frac{9}{8}\right\}$ D) $\emptyset$

7) $|8x - 1| = |x + 3|$ 7) _____
 A) $\left\{\frac{4}{7}, -\frac{2}{9}\right\}$ B) $\left\{-\frac{4}{7}, \frac{2}{9}\right\}$ C) $\left\{\frac{4}{7}, -\frac{5}{9}\right\}$ D) $\emptyset$

8) $\left|\frac{1}{2}x + 2\right| = \left|\frac{3}{4}x - 2\right|$ 8) _____
 A) {16, 12} B) {16, 0} C) {10, 10} D) $\emptyset$

9) $\left|\frac{2x + 6}{3}\right| = 2$ 9) _____
 A) {6, 0} B) {-6, 0} C) {-6, 6} D) $\emptyset$

10) $|3(x + 1) + 9| = 15$ 10) _____
 A) {-9, 0} B) {-9, 1} C) {-7, 0} D) {-7, 3}

Answer Key

Testname: 2_ ABSOLUTE VALUE EQUATIONS

- 1) C
- 2) C
- 3) C
- 4) C
- 5) C
- 6) D
- 7) A
- 8) B
- 9) B
- 10) B