

10.6 Solving Equations with Radicals

10.7 Complex Numbers

Solve the equation.

1) $\sqrt{q+1} = 3$
A) {8}

B) {16}

C) {10}

D) {9}

1) _____

2) $\sqrt{7x-5} - 10 = 0$
A) {100}

B) \emptyset

C) $\left\{\frac{15}{7}\right\}$

D) $\{15\}$

2) _____

3) $\sqrt{6a-2} - \sqrt{3a+9} = 0$
A) $\left\{\frac{7}{3}\right\}$

B) $\left\{\frac{3}{11}\right\}$

C) $\left\{\frac{11}{3}\right\}$

D) $\left\{\frac{11}{9}\right\}$

3) _____

4) $x = \sqrt{x^2 + 3x - 9}$
A) $\{-3\}$

B) $\left\{\frac{1}{3}\right\}$

C) $\{3\}$

D) \emptyset

4) _____

Solve this equation.

5) $\sqrt{p^2 - 5p + 81} = p + 4$
A) {9}

B) {-5}

C) {5}

D) $\left\{-\frac{5}{2}\right\}$

5) _____

6) $\sqrt{x+7} + 5 = x$
A) {9, 18}

B) {2}

C) {2, 9}

D) {9}

6) _____

7) $\sqrt{x^2 + 2x + 22} + 1 = x$
A) $\frac{21}{4}$

B) \emptyset

C) $-\frac{21}{4}$

D) $\frac{4}{21}$

7) _____

Solve the equation.

8) $\sqrt[3]{4+6t} - \sqrt[3]{1-8t} = 0$
A) $\left\{\frac{3}{14}\right\}$

B) $\left\{-\frac{3}{14}\right\}$

C) $\left\{\frac{14}{3}\right\}$

D) $\left\{-\frac{14}{3}\right\}$

8) _____

9) $\sqrt[4]{k-5} + 4 = 0$
A) $\left\{\frac{4}{5}\right\}$

B) $\left\{-\frac{256}{5}\right\}$

C) \emptyset

D) $\left\{\frac{256}{5}\right\}$

9) _____

10) $\sqrt[4]{t+2} = \sqrt[4]{7t}$
A) $\left\{\frac{1}{3}\right\}$

B) $\left\{\frac{2}{7}\right\}$

C) \emptyset

D) $\{3\}$

10) _____

11) $\sqrt{3x+1} = 3 + \sqrt{x-4}$ 11) _____
A) {5, 8} B) {-1} C) \emptyset D) {-5, -8}

12) $\sqrt{x+6} + \sqrt{2-x} = 4$ 12) _____
A) {-2} B) {0} C) {2, -2} D) $\{\sqrt{31}, -2\}$

Rewrite the expressions with rational exponents as radical expressions, and then solve the equation.

13) $(x^2 + 2)^{1/2} - (2x + 5)^{1/2} = 0$ 13) _____
A) {3} B) {3, -1} C) {-3, 1} D) \emptyset

14) $(x^2 - 3)^{1/2} - (x + 3)^{1/2} = 0$ 14) _____
A) {-3} B) {2, 3} C) {-2, 3} D) {-3, 3}

15) $(3x + 1)^{1/2} = 3 + (x - 4)^{1/2}$ 15) _____
A) {-5, -8} B) \emptyset C) {-1} D) {5, 8}

Answer Key

Testname: PRACTICE18A

- 1) A
- 2) D
- 3) C
- 4) C
- 5) C
- 6) D
- 7) B
- 8) B
- 9) C
- 10) A
- 11) A
- 12) A
- 13) B
- 14) C
- 15) D