

Assignment

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Solve each equation. Remember to check for extraneous solutions.

1) $1 = \sqrt{\frac{x}{3}}$

2) $5 = \sqrt{x}$

3) $4 = \sqrt{x + 3}$

4) $\sqrt{9 - m} = \sqrt{m - 3}$

$$5) \sqrt{-4-x} = \sqrt{-12-2x}$$

$$6) \sqrt{72-x} = x$$

$$7) \sqrt{-36+12v} = v$$

$$8) x = \sqrt{10x}$$

$$9) \sqrt{2x} = 6$$

$$10) \sqrt{7-n} = \sqrt{n-3}$$

Solve each equation.

$$11) 512 = a^{\frac{3}{2}}$$

$$12) x^{\frac{4}{3}} = 256$$

$$13) (7x)^{\frac{3}{2}} = 343$$

$$14) -622 = 3 - 5n^{\frac{3}{2}}$$

$$15) 4p^{\frac{1}{3}} + 3 = 11$$

$$16) -120 = -4k^{\frac{5}{4}} + 8$$

$$17) -(4x - 8)^{\frac{3}{2}} = -512$$

$$18) 10 = \sqrt{1 - 16n} + 3$$

$$19) 22 = 2(62 - 2x)^{\frac{2}{3}} - 10$$

$$20) m^{\frac{3}{2}} = 216$$

$$21) -8 + 3(5b + 4)^{\frac{3}{2}} = 1021$$

$$22) -2 - 4(16 - 6v)^{\frac{3}{2}} = -4002$$

$$23) 729 = (81n)^{\frac{3}{2}}$$

$$24) 4 = r^{\frac{1}{2}}$$

$$25) 28 = 3\sqrt{x} + 1$$

$$26) -35 = -4\sqrt{3n - 26} - 3$$

$$27) 10 + 5(51 - x)^{\frac{3}{4}} = 145$$

$$28) -\frac{67}{8} = 5(8a)^{-\frac{1}{2}} - 9$$

$$29) -688 = -2 - 2(24 - p)^{\frac{3}{2}}$$

$$30) (2k + 44)^{\frac{4}{3}} - 2 = 14$$

Assignment

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Solve each equation. Remember to check for extraneous solutions.

1) $1 = \sqrt{\frac{x}{3}}$

 $\{3\}$

2) $5 = \sqrt{x}$

 $\{25\}$

3) $4 = \sqrt{x+3}$

 $\{13\}$

4) $\sqrt{9-m} = \sqrt{m-3}$

 $\{6\}$

$$5) \sqrt{-4-x} = \sqrt{-12-2x}$$
$$\{-8\}$$

$$6) \sqrt{72-x} = x$$
$$\{8\}$$

$$7) \sqrt{-36+12v} = v$$
$$\{6\}$$

$$8) x = \sqrt{10x}$$
$$\{0, 10\}$$

$$9) \sqrt{2x} = 6$$
$$\{18\}$$

$$10) \sqrt{7-n} = \sqrt{n-3}$$
$$\{5\}$$

Solve each equation.

$$11) 512 = a^{\frac{3}{2}}$$

$\{64\}$

$$12) x^{\frac{4}{3}} = 256$$

$\{64, -64\}$

$$13) (7x)^{\frac{3}{2}} = 343$$

$\{7\}$

$$14) -622 = 3 - 5n^{\frac{3}{2}}$$

$\{25\}$

$$15) 4p^{\frac{1}{3}} + 3 = 11$$
$$\{8\}$$

$$16) -120 = -4k^{\frac{5}{4}} + 8$$
$$\{16\}$$

$$17) -(4x - 8)^{\frac{3}{2}} = -512$$
$$\{18\}$$

$$18) 10 = \sqrt{1 - 16n} + 3$$
$$\{-3\}$$

$$19) 22 = 2(62 - 2x)^{\frac{2}{3}} - 10$$
$$\{-1, 63\}$$

$$20) m^{\frac{3}{2}} = 216$$
$$\{36\}$$

$$21) -8 + 3(5b + 4)^{\frac{3}{2}} = 1021$$

{9}

$$22) -2 - 4(16 - 6v)^{\frac{3}{2}} = -4002$$

{-14}

$$23) 729 = (81n)^{\frac{3}{2}}$$

{1}

$$24) 4 = r^{\frac{1}{2}}$$

{16}

$$25) 28 = 3\sqrt{x} + 1$$

{81}

$$26) -35 = -4\sqrt{3n - 26} - 3$$

{30}

$$27) 10 + 5(51 - x)^{\frac{3}{4}} = 145$$
$$\{-30\}$$

$$28) -\frac{67}{8} = 5(8a)^{-\frac{1}{2}} - 9$$
$$\{8\}$$

$$29) -688 = -2 - 2(24 - p)^{\frac{3}{2}}$$
$$\{-25\}$$

$$30) (2k + 44)^{\frac{4}{3}} - 2 = 14$$
$$\{-18, -26\}$$