Think Academy

How to Solve Equations with Fractions and Decimals

1 Find the solution to the equation.

$$x + \frac{1}{5} = \frac{7}{15}$$

$$x = \_\_\_\_$$

2 Find the solution to the equation.

$$x - \frac{1}{4} = -\frac{15}{16}$$

$$x = \_\_\_\_$$

3 Find the solution to the equation.

$$\frac{7}{8} - x = \frac{3}{8}$$

$x =$ _____

4 Find the solution to the equation.

$$\frac{3}{4}x - 1 = \frac{5}{6}x - 2$$

$x =$ _____

5 Solve the equation $2 - \frac{x-5}{9} = \frac{15-x}{6}$

A. 19 B. 1 C. -1 D. 14.2

6 Find the solution to the equation.

$$x + 6.9 = 19.4$$

$$x = \_\_\_\_\_$$

7 Find the solution to the equation.

$$x - 4.5 = 9.5$$

$$x = \_\_\_\_\_$$

8 Find the solution to the equation.

$$x - 7.1 = 4.4$$

$$x = \_\_\_\_\_$$

9 Find the solution to the equation.

$$5x = 15.6$$

$$x = \_\_\_\_\_$$

10 Find the solution to the equation.

$$x \div 1.8 = 45$$

$$x = \_\_\_\_\_$$

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How to Solve Equations with Fractions and Decimals

1 Find the solution to the equation.

$$x+\frac{1}{5}=\frac{7}{15}$$

$$x=\_\_\_\_$$

Answer $\frac{4}{15}$

Solution
$$x+\frac{1}{5}=\frac{7}{15}$$
$$x+\frac{1}{5}-\frac{1}{5}=\frac{7}{15}-\frac{1}{5}$$
$$x=\frac{7}{15}-\frac{3}{15}$$
$$x=\frac{4}{15}$$

2 Find the solution to the equation.

$$x-\frac{1}{4}=-\frac{15}{16}$$

$$x=\_\_\_\_$$

Answer $-\frac{11}{16}$

Solution
$$x-\frac{1}{4}=-\frac{15}{16}$$
$$x-\frac{1}{4}+\frac{1}{4}=-\frac{15}{16}+\frac{1}{4}$$
$$x=-\frac{11}{16}$$

3 Find the solution to the equation.

$$\frac{7}{8}-x=\frac{3}{8}$$

$$x=\_\_\_\_$$

Answer $\frac{1}{2}$

Solution
$$\frac{7}{8}-x=\frac{3}{8}$$
$$\frac{7}{8}-x-\frac{3}{8}=\frac{3}{8}-\frac{3}{8}$$
$$\frac{4}{8}-x=0$$
$$x=\frac{4}{8}$$
$$x=\frac{1}{2}$$

4 Find the solution to the equation.

$$\frac{3}{4}x-1=\frac{5}{6}x-2$$
$$x=\_\_\_\_$$

Answer 12

Solution
$$\frac{3}{4}x-1=\frac{5}{6}x-2$$
$$12\cdot\frac{3}{4}x-12\cdot1=12\cdot\frac{5}{6}x-12\cdot2$$
$$9x-12=10x-24$$
$$9x-12-10x=10x-24-10x$$
$$-x-12=-24$$
$$-x-12+12=-24+12$$
$$-x=-12$$
$$x=12$$

5 Solve the equation $2-\frac{x-5}{9}=\frac{15-x}{6}$

A. 19 B. 1 C. -1 D. 14.2

Answer C

Solution $2-\frac{x-5}{9}=\frac{15-x}{6}$

$$18 \cdot 2 - 18 \cdot \frac{x-5}{9} = 18 \cdot \frac{15-x}{6}$$

$$36 - 2(x-5) = 3(15-x)$$

$$36 - 2x + 10 = 45 - 3x$$

$$x = 45 - 36 - 10$$

$$x = -1$$

6 Find the solution to the equation.

$$x + 6.9 = 19.4$$

$$x = \_\_\_\_$$

Answer 12.5

Solution $x + 6.9 = 19.4$

$$x + 6.9 - 6.9 = 19.4 - 6.9$$

$$x = 12.5$$

7 Find the solution to the equation.

$$x - 4.5 = 9.5$$

$$x = \_\_\_\_$$

Answer 14

Solution $x - 4.5 = 9.5$

$$x - 4.5 + 4.5 = 9.5 + 4.5$$

$$x = 14$$

8 Find the solution to the equation.

$$x - 7.1 = 4.4$$

$x =$ _____

Answer 11.5

Solution $x - 7.1 = 4.4$

$x - 7.1 + 7.1 = 4.4 + 7.1$

$x = 11.5$

9 Find the solution to the equation.

$5x = 15.6$

$x =$ _____

Answer 3.12

Solution $5x = 15.6$

$x = 15.6 \div 5$

$x = 3.12$

10 Find the solution to the equation.

$x \div 1.8 = 45$

$x =$ _____

Answer 81

Solution $x \div 1.8 = 45$

$x = 45 \times 1.8$

$x = 81$