

Solving Equations Practice

Name: _____

Date: _____

Question 1

Solve for x

I. $7 - x = 15$

II. $x - 7 = 15$

III. $x + 9 = 47$

IV. $\frac{4}{5} + x = \frac{6}{7}$

V. $\frac{4}{5} - x = \frac{6}{7}$

Solving Equations Practice

VI. $x - \frac{4}{5} = \frac{6}{7}$

VII. $-6 + -x = 12$

VIII. $-6 - -x = 12$

IX. $-x + -6 = 12$

X. $-x - -6 = 12$

XI. $-x = -8$

Solving Equations Practice

XII. $-x = 8$

XIII. $4x = 36$

XIV. $\frac{x}{2} = 96$

XV. $\frac{2}{x} = 96$

XVI. $\frac{4}{x} = \frac{3}{7}$

XVII. $\frac{2x}{9} = \frac{3}{19}$

Solving Equations Practice

XVIII. $x - 2.8 = 6.3$

XIX. $0.2x = 10$

XX. $2x + 9 = 25$

XXI. $\frac{4x}{5} - 8 = 2$

XXII. $6x + 10x = 18$

XXIII. $2 - 5x = 26 - x$

Solving Equations Practice

XXIV. $\frac{1x}{3} + \frac{2}{5} = \frac{3x}{5} + \frac{4}{5} - \frac{2}{3}$

XXV. $\frac{1}{5} (4x - 1) = 7$

Solving Equations Practice

Name: _____ **Key**

Date: _____

Question 1

Solve for x

l. $7 - x = 15$

$$7 - 7 - x = 15 - 7 \longrightarrow \frac{-x}{-1} = \frac{8}{-1} \longrightarrow x = -8$$

$$\text{II. } x - 7 = 15$$

$$x - \cancel{7} + \cancel{7} = 15 + 7 \longrightarrow x = 22$$

cancel

III. $x + 9 = 47$

$$x + \cancel{9} - \cancel{9} = 47 - 9 \longrightarrow x = 38$$

cancel

IV. $\frac{4}{5} + x = \frac{6}{7}$

$$\frac{\cancel{4}}{\cancel{5}} - \frac{\cancel{4}}{\cancel{5}} + x = \frac{6}{7} - \frac{4}{5} \longrightarrow x = \frac{6}{7} \cdot \frac{5}{5} - \frac{4}{5} \cdot \frac{7}{7} \longrightarrow x = \frac{30}{35} - \frac{28}{35}$$

cancel

$$x = \frac{2}{35}$$

V. $\frac{4}{5} - x = \frac{6}{7}$

$$\begin{aligned} \frac{\cancel{4}}{\cancel{5}} - \frac{\cancel{4}}{\cancel{5}} - x &= \frac{6}{7} - \frac{4}{5} \longrightarrow -x = \frac{6}{7} \cdot \frac{5}{5} - \frac{4}{5} \cdot \frac{7}{7} \longrightarrow -x = \frac{30}{35} - \frac{28}{35} \\ \text{cancel} \qquad \qquad \qquad x &= \frac{-2}{35} \longleftarrow \frac{\cancel{-x}}{\cancel{-1}} = \frac{2}{\underset{-1}{35}} \longleftarrow -x = \frac{2}{35} \downarrow \end{aligned}$$

© 202

Solving Equations Practice

VI.

$$x - \frac{4}{5} = \frac{6}{7}$$

$$x - \frac{4}{5} + \frac{4}{5} = \frac{6}{7} + \frac{4}{5} \longrightarrow x = \frac{6}{7} \cdot \frac{5}{5} + \frac{4}{5} \cdot \frac{7}{7} \longrightarrow x = \frac{30}{35} + \frac{28}{35}$$

cancel

$$x = \frac{58}{35}$$

VII.

$$-6 + -x = 12$$

$$-6 - 6 + -x = 12 - 6 \longrightarrow \frac{-x}{-1} = \frac{18}{-1} \longrightarrow x = -18$$

cancel

cancel

VIII.

$$-6 - -x = 12$$

$$-6 - 6 - -x = 12 - 6 \longrightarrow -(-x) = 18 \longrightarrow x = 18$$

cancel

IX.

$$-x + -6 = 12$$

$$-x + -6 - 6 = 12 - 6 \longrightarrow \frac{-x}{-1} = \frac{18}{-1} \longrightarrow x = -18$$

cancel

cancel

X.

$$-x - -6 = 12$$

$$-x - 6 + 6 = 12 + -6 \longrightarrow \frac{-x}{-1} = \frac{6}{-1} \longrightarrow x = -6$$

cancel

cancel

XI.

$$-x = -8$$

$$\frac{-x}{-1} = \frac{-8}{-1} \longrightarrow x = 8$$

cancel

Solving Equations Practice

XII.

$$-x = 8$$

$$\frac{-x}{-1} = \frac{8}{-1} \longrightarrow x = -8$$

cancel

XIII.

$$4x = 36$$

$$\frac{4x}{4} = \frac{36}{4} \longrightarrow x = 9$$

cancel

XIV.

$$\frac{x}{2} = 96$$

$$\frac{2}{1} \cdot \frac{x}{2} = 96 \cdot \frac{2}{1} \longrightarrow x = 192$$

cancel

XV.

$$\frac{2}{x} = 96$$

$$\frac{2}{x} \cdot \frac{96}{1} \longrightarrow 2 = 96x \longrightarrow \frac{2}{96} = \frac{96x}{96} \longrightarrow x = \frac{1}{48}$$

cancel

XVI.

$$\frac{4}{x} = \frac{3}{7}$$

$$\frac{4}{x} \cdot \frac{3}{7} \longrightarrow 28 = 3x \longrightarrow \frac{28}{3} = \frac{3x}{3} \longrightarrow x = \frac{28}{3}$$

cancel

XVII.

$$\frac{2x}{9} = \frac{3}{19}$$

$$\frac{9}{2} \cdot \frac{2x}{9} = \frac{3}{19} \cdot \frac{9}{2} \longrightarrow x = \frac{27}{38}$$

cancel

Solving Equations Practice

XVIII. $x - 2.8 = 6.3$

$$x - \cancel{2.8} + \cancel{2.8} = 6.3 + 2.8 \longrightarrow x = 9.1$$

cancel

XIX. $0.2x = 10$

$$\frac{\cancel{0.2}x}{\cancel{0.2}} = \frac{10}{0.2} \longrightarrow x = 50$$

cancel

XX. $2x + 9 = 25$

$$2x + \cancel{9} - \cancel{9} = 25 - 9 \longrightarrow \frac{\cancel{2}x}{\cancel{2}} = \frac{16}{2} \longrightarrow x = 8$$

cancel

cancel

XXI. $\frac{4x}{5} - 8 = 2$

$$\frac{4x}{5} - \cancel{8} + \cancel{8} = 2 + 8 \longrightarrow \frac{\cancel{5}}{\cancel{4}} \cdot \frac{\cancel{4}x}{\cancel{5}} = 10 \cdot \frac{5}{4} \longrightarrow x = \frac{25}{2}$$

cancel

cancel

XXII. $6x + 10x = 18$

$$6x + 10x = 18 \longrightarrow 16x = 18 \longrightarrow \frac{\cancel{16}x}{\cancel{16}} = \frac{18}{16} \longrightarrow x = \frac{9}{8}$$

cancel

XXIII. $2 - 5x = 26 - x$

$$2 - 5x + x = 26 - \cancel{x} + \cancel{x} \longrightarrow 2 - 4x = 26 \longrightarrow \cancel{2} - \cancel{2} - 4x = 26 - 2 \longrightarrow \frac{\cancel{-4}x}{\cancel{-4}} = \frac{24}{-4} \longrightarrow x = -6$$

cancel

cancel

cancel

Solving Equations Practice

XXIV. $\frac{1x}{3} + \frac{2}{5} = \frac{3x}{5} + \frac{4}{5} - \frac{2}{3}$

$$\frac{1x}{3} + \frac{2}{5} = \frac{3x}{5} + \frac{4}{5} \cdot \frac{3}{3} - \frac{2}{3} \cdot \frac{5}{5} \longrightarrow \frac{1x}{3} + \frac{2}{5} = \frac{3x}{5} + \frac{12}{15} - \frac{10}{15}$$

$$\frac{1x}{3} - \frac{3x}{5} + \frac{2}{5} = \frac{\cancel{3x}}{5} - \frac{\cancel{3x}}{5} + \frac{2}{15} \longleftarrow \frac{1x}{3} + \frac{2}{5} = \frac{3x}{5} + \frac{2}{15}$$

$$\frac{1x}{3} \cdot \frac{5}{5} - \frac{3x}{5} \cdot \frac{3}{3} + \frac{2}{5} = \frac{2}{15} \longrightarrow \frac{5x}{15} - \frac{9x}{15} + \frac{2}{5} = \frac{2}{15} \longrightarrow \frac{-4x}{15} + \frac{2}{5} = \frac{2}{15}$$

$$\frac{-4x}{15} = \frac{2}{15} - \frac{6}{15} \longleftarrow \frac{-4x}{15} = \frac{2}{15} - \frac{2}{5} \cdot \frac{3}{3} \longleftarrow \frac{-4x}{15} + \frac{\cancel{2}}{5} - \frac{\cancel{2}}{5} = \frac{2}{15} - \frac{2}{5}$$

$$\frac{-4x}{15} = \frac{-4}{15} \longrightarrow \frac{\cancel{15}}{-4} \cdot \frac{-4x}{\cancel{15}} = \frac{-4}{15} \cdot \frac{15}{-4} \longrightarrow x = 1$$

XXV. $\frac{1}{5} (4x - 1) = 7$

$$\frac{1}{5} (4x - 1) = 7 \longrightarrow \frac{4x}{5} - \frac{1}{5} = 7 \longrightarrow \frac{4x}{5} - \frac{\cancel{1}}{5} + \frac{\cancel{1}}{5} = 7 + \frac{1}{5}$$

$$\frac{\cancel{5}}{4} \cdot \frac{4x}{\cancel{5}} = \frac{36}{5} \cdot \frac{5}{4} \longleftarrow \frac{4x}{5} = \frac{35}{5} + \frac{1}{5} \longleftarrow \frac{4x}{5} = 7 \cdot \frac{5}{5} + \frac{1}{5}$$

$x = 9$