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

I. $7 - x = 15$

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

II. $x - 7 = 15$

$x - 7 + 7 = 15 + 7$ (cancel) $\longrightarrow x = 22$

III. $x + 9 = 47$

$x + 9 - 9 = 47 - 9$ (cancel) $\longrightarrow x = 38$

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

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

$\downarrow$

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

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

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

$\downarrow$

$x = \frac{-2}{35} \longleftarrow \frac{-x}{-1} = \frac{\frac{2}{35}}{-1}$ (cancel) $\longleftarrow -x = \frac{2}{35}$

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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

$\downarrow$

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

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

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

cancel

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

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

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. $x - 2.8 = 6.3$

$x - 2.8 + 2.8 = 6.3 + 2.8 \longrightarrow x = 9.1$

cancel

XIX. $0.2x = 10$

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

cancel

XX. $2x + 9 = 25$

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

cancel

cancel

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

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

cancel

cancel

XXII. $6x + 10x = 18$

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

cancel

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

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

cancel

cancel

cancel

Solving Equations Practice

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

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

$\downarrow$

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

cancel

$\downarrow$

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

$\downarrow$

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

cancel

$\downarrow$

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

cancel

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

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

cancel

$\downarrow$

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

cancel

$\downarrow$

$x = 9$