Unit 1

Name: _Ans key_ Date: _12/16/24_

After completing each question, write which property of equality (1, or multiple) was used.

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1. Solve for x: $1.5x = 30$

$$\frac{1.5x}{1.5}$$

$\boxed{x = 20}$ ↖ division prop.

$1.5(20) = 30$ ✓

2. Solve for x: $0.6x + 1.5 = 3.9$

$$\frac{.6x = 2.4}{.6}$$

subtraction prop

division prop

$.6(4) = 2.4$ ✓

$\boxed{x = 4}$

3. Solve for x: $\frac{2}{3}x = -12$

$$\frac{2x = -36}{2}$$

$\boxed{x = -18}$

division prop

$\frac{2}{3}(-18) = -12$ ✓

4. Solve for x: $1.2x + 0.3 = 7.5$

$$\frac{1.2x = 7.2}{1.2}$$

$\boxed{x = 6}$

division prop.

$1.2(6) = 7.2$ ✓

subtraction prop

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5. Solve for x: $\frac{2}{3}x - 1 = 5$

$\frac{2}{3}x = 6$ multiplication prop.

$\boxed{x = 9}$ Devision prop.

6. Solve for x: $0.4x + 3 = 15$

$\dfrac{.4x = 12}{.4}$ $.4(30) = 12 ✓$

$\boxed{x = 30}$ Devision prop

7. Solve for x: $4(x-2) - 3 = 9$

$4x - 8 - 3 = 9$ $4(5) - 8 - 3 = 9 ✓$

$4x - 11 = 9$
$\quad +11 \ +11$
$4x = 20$ $\boxed{x=5}$ addition prop
                       devision prop

8. Solve for x: $5(2x - 4) = 10$

$10x - 20 = 10$

$\dfrac{10x = 30}{10}$ $10(3) - 20 = 10 ✓$

               addition prop

$\boxed{x = 3}$ devision prop

9. Solve for x: $0.15x = 5.25$

$\dfrac{.15x = 5.25}{.15}$ $.15(3.5) = 5.25 ✓$

$\boxed{x = 3.5}$ division prop

10. Solve for x: $21 = 3(x + 2)$

$21 = 3x + 6$

              $21 = 3(5) + 6 ✓$

$\dfrac{15 = 3x}{3}$ subtraction prop

$\boxed{x = 5}$ devision prop