Topic 4.1–4.3 Quiz

Name:⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ Date:⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯

1. (6 pts) Match each term with its correct definition.

    1.⎯⎯ A mathematical sentence that uses an equal sign.   A. Equation

    2.⎯⎯ A value that makes an equation true.   B. Solution

    3.⎯⎯ Adding the same number to both sides keeps the   C. Addition Property
equation equal.

    4.⎯⎯ Subtracting the same number from both sides   D. Subtraction Property
keeps the equation equal.

    5.⎯⎯ Multiplying both sides by the same number keeps   E. Multiplication Property
the equation equal.

    6.⎯⎯ Dividing both sides by the same nonzero number   F. Division Property
keeps the equation equal.

2. (4 pts) Operations that undo each other have an ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ relationship.

3. (10 pts) What is a solution to the equation $8y = 48$?

    A. $y = 5$

    B. $y = 6$

    C. $y = 7$

    D. $y = 8$

    E. $y = 9$

4. (10 pts) You have \$45.50 and already spent \$4.50, \$15.40, and \$25.00. What is the most expensive item you can still buy?

    A. Nothing

    B. \$0.10

    C. \$0.50

    D. \$0.60

    E. \$0.70

5. (10 pts) Which equation is equivalent to $n + 11 = 24$?

    A. $(n + 11) + 2 = 24 - 2$

    B. $(n + 11) \times 2 = 24 \div 2$

    C. $(n + 11) - 2 = 24 \times 2$

    D. $(n + 11) - 2 = 22$

    E. $(n + 11) \times 2 = 44$

6. (10 pts) A scale is balanced by 30 green blocks and 20 blue blocks. If 10 green blocks are removed, how many blue blocks must be removed to keep it balanced?

    A. $\frac{1}{4}$ of the blue blocks

    B. $\frac{1}{3}$ of the blue blocks

    C. $\frac{1}{2}$ of the blue blocks

    D. $\frac{2}{3}$ of the blue blocks

    E. 15 blue blocks

7. (10 pts) Which equations have $x = 4$ as the solution?

    A. $x + 4 = 7$

    B. $5x = 25$

    C. $\dfrac{x}{4} = 1.5$

    D. $x - 3 = 2$

    E. $2x - 5 = 3$

8. (10 pts) A fundraiser has a goal of \$100. Omer raised \$25, James \$15, Alex \$25, and John \$50. Which equation represents the situation if c is the amount donated to charity?

    A. $c = 25 + 15 + 25 + 50 + 100$

    B. $100 + c = 25 + 15 + 25 + 50$

    C. $c - 100 = 25 + 15 + 25 + 50$

    D. $100 = 25 + 15 + 25 + 50 + c$

    E. $c = 20$

9. (10 pts) Write four equations using $+$, $-$, $\times$, and $\div$ that have the same solution as

$$x - 15 = 21.$$

10. (10 pts) Write four equations, each using an equality property, that are equivalent to

$$5s = 20.$$

11. (10 pts) The temperature dropped 20°F from breakfast to dinner. At dinner, the temperature was 35°F.

    Write and solve an equation to find the temperature t at breakfast.