G8-U1: – Multi-Step Equation Practice

Directions: Solve the following equations, show the check when asked.

1. $24 = -6(m+1)+18$ *Check:*

2. $7k - 8 + 2(k+12) = 52$ **3.** $2x - 3 + 4x = 39$

4. $3(3a+3)+6 = 81$ *Check:*

5. $20 = -4(f+6)+14$ **6.** $9a - 4 = 3(3a-11)$

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7. You want to join the tennis team. You go to the sporting goods store with $100. If the tennis racket you want costs $80 and the tennis balls cost $4 per can, how many cans of tennis balls can you buy?

8. Johnny wants to ship a package to his friend. A shipping company charges a flat fee of $2.49 and $1.24 for each pound. If it cost Johnny $11.17 to ship the package, how much did his package weigh?

9. $\dfrac{2}{3}(6x+3)=4x+2$

10. $\dfrac{2(x-7)}{6}=21$

11. $0.7w+16+4w=27.28$

12. $\dfrac{1}{2}d-\dfrac{3}{4}=\dfrac{3}{5}d$

13. $6(f+5)=2(f-4)$

14. $\dfrac{2}{5}(5k+35)-8=12$

15. The perimeter of a pool table is 30 ft. The table is twice as long as it is wide. What is the length of the pool table?

16. Two angles are congruent (they are the same measure). One angle is represented by the expression $(1.15 + 0.8x)°$, and the other angle is $(2.3 - 1.5x)°$. Write an equation and solve for each angle.

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Multiple Choice:
17.   Which of the following expressions is equivalent to $3(x+4)-6+5x$?

a) $3x+12-x$ **b)** $8x+6$ **c)** $8x-2$ **d)** $2x+6$

18.   Simplify the expression. $-6-7(c+10)$

a) $64-7c$ **b)** $-76-7c$ **c)** $4-13c$ **d)** $-16-13c$

19.   Solve: $\dfrac{1}{4}x+\dfrac{1}{2}=\dfrac{1}{4}x-\dfrac{1}{2}$

a) No solution   **b)** 1   **c)** Identity   **d)** 2

20.   Chose the verbal expression that matches the given algebraic expression.

The variable *s* stands for the number of units in one side of a square.
$4s - 4$

   a) The perimeter of the square increased by four units.

   b) The perimeter of the square decreased by four units.

   c) Four times the perimeter of the square increased by four units.

   d) The product of four and the perimeter of the square.

21.   For what values of *a* and *b* will the equation: $3(2x + 15) = ax + b$ have exactly one solution?

a) $a = 6$ **b)** $a = 6$ **c)** $a = 5$ **d)** $a = 5$
$b = 15$ $b = 45$ $b = 60$ $b = x$