Principles of Algebra Name/Date Clee / Today

ALL PROBLEMS CAN BE COMPLETED ON THIS WORKSHEET

WS 3A.2 – More Solving One and Two-Step Equations

#1-16, Solve each equation.

1. $w - 7 = -21$ (+7 +7) → $w = -14$

2. $w + 7 = -21$ (−7 −7) → $w = -28$

3. $\frac{7w}{7} = \frac{-21}{7}$ → $w = -3$

4. $\frac{w}{7} = -21$ (·7 ·7) → $w = -147$

5. $8 + p = -24$ (−8 −8) → $p = -32$

6. $-8 + p = -24$ (+8 +8) → $p = -16$

7. $\frac{-8p}{-8} = \frac{-24}{-8}$ → $p = 3$

8. $\frac{p}{-8} = -24$ (·(−8) ·(−8)) → $p = 192$

9. $-2y + 5 = 17$ (−5 −5)

$\frac{-2y}{-2} = \frac{12}{-2}$ → $y = -6$

10. $-8m - 12 = 20$ (+12 +12)

$\frac{-8m}{-8} = \frac{32}{-8}$ → $m = -4$

11. $13 = \frac{a}{3} - 4$ (+4 +4)

$17 \cdot 3 = \frac{a}{3} \cdot 3$

$51 = a \Rightarrow a = 51$

12. $\frac{n}{-5} - 22 = -20$ (+22 +22)

$\frac{n}{-5} \cdot (-5) = 2 \cdot (-5)$ → $n = -10$

13. $9 = 7 - \frac{j}{4}$ (−7 −7)

$2 \cdot (-4) = -\frac{j}{4} \cdot (-4)$

$-8 = j \Rightarrow j = -8$

14. $1 - 4n = 65$ (−1 −1)

$\frac{-4n}{-4} = \frac{64}{-4}$ → $n = -16$

15. $4z + 12 = -18$ (−12 −12)

$\frac{4z}{4} = \frac{-30}{4}$

$z = -\frac{30}{4} \Rightarrow z = \frac{-15}{2}$

16. $8.35 = -1.25q - 2$ (+2 +2)

$\frac{10.35}{-1.25} = \frac{-1.25q}{-1.25}$

$-8.28 = q \Rightarrow q = -8.28$

17. Twelve decreased by the quotient of a number and −2 is 15. Find the number.

let n = the number

$12 - \frac{n}{-2} = 15$ (−12 −12)

$\frac{n}{2} \cdot 2 = 3 \cdot 2$

$n = 6$

The number is 6.

18. If 11.2 less than the average of 5 numbers is 27.75, what is the sum of the numbers?

let m = the sum of the 5 numbers

$\frac{m}{5} - 11.2 = 27.75$ (+11.2 +11.2)

$\frac{m}{5} \cdot 5 = 38.95 \cdot 5$

$m = 194.75$

The sum of the numbers is 194.75.