Principles of Algebra Name/Date Clee / Today

ALL PROBLEMS CAN BE COMPLETED ON THIS WORKSHEET

WS 3A.1 – Solving One and Two-Step Equations

#1-16, Solve each equation.

1. $x + 4 = 12$
   $-4 \quad -4$
   $x = 8$

2. $x - 4 = 12$
   $+4 \quad +4$
   $x = 16$

3. $\frac{4x}{4} = \frac{12}{4}$
   $x = 3$

4. $\frac{x}{4} = 12$ $\cdot 4 \quad \cdot 4$
   $x = 48$

5. $5 + n = 30$
   $-5 \quad -5$
   $n = 25$

6. $-5 + n = 30$
   $+5 \quad +5$
   $n = 35$

7. $\frac{-5n}{-5} = \frac{30}{-5}$
   $n = -6$

8. $\frac{n}{-5} = 30$ $\cdot(-5) \quad \cdot(-5)$
   $n = -150$

9. $6x + 9 = 39$
   $-9 \quad -9$
   $\frac{6x}{6} = \frac{30}{6}$
   $x = 5$

10. $20 = 2d - 6$
    $+6 \quad +6$
    $\frac{26}{2} = \frac{2d}{2}$
    $13 = d \rightarrow d = 13$

11. $6 - 2d = 42$
    $-6 \quad -6$
    $\frac{-2d}{-2} = \frac{36}{-2}$
    $d = -18$

12. $\frac{b}{4} + 12 = -4$
    $-12 \quad -12$
    $\frac{b}{4} \cdot 4 = -16 \cdot 4$
    $b = -64$

13. $15 = -7 - \frac{z}{6}$
    $+7 \quad +7$
    $22 \cdot(-6) = -\frac{z}{6} \cdot(-6)$
    $-132 = z \rightarrow z = -132$

14. $10 - q = -25$
    $-10 \quad -10$
    $\frac{-q}{-1} = \frac{-35}{-1}$
    $q = 35$

15. $12 = -9 - \frac{r}{5}$
    $+9 \quad +9$
    $21 \cdot(-5) = -\frac{r}{5} \cdot(-5)$
    $-105 = r \rightarrow r = -105$

16. $12h + 2.5 = -21.5$
    $-2.5 \quad -2.5$
    $\frac{12h}{12} = \frac{-24}{12}$
    $h = -2$

17. A startup phone carrier offers cell phone service for $32.95 per month plus an intial charge of $49.99. If Fernando spent a total of $346.54 on his phone service, how many months did he pay for?

let m = number of months paid

$32.95m + 49.99 = 346.54$
$-49.99 \quad -49.99$
$\frac{32.95m}{32.95} = \frac{296.55}{32.95}$
$m = 9$

Fernando paid for 9 months.

18. Kylie has some quarters and $5.15 in nickels. If she has $7.90 total, how many quarters does she have?

let q = number of quarters Kylie has

$0.25q + 5.15 = 7.90$
$-5.15 \quad -5.15$
$\frac{0.25q}{0.25} = \frac{2.75}{0.25}$
$q = 11$

Kylie has 11 quarters.