NAMES: (all in group) Per.:

Reteaching 3-6 Simplifying and Solving Equations

Combining terms can help solve equations.

Solve: $5n + 6 + 3n = 22$

$$\begin{aligned} 8n + 6 &= 22 \\ 8n + 6 - 6 &= 22 - 6 \\ 8n &= 16 \\ \frac{8n}{8} &= \frac{16}{8} \\ n &= 2 \end{aligned}$$

Check: $5n + 6 + 3n = 22$

$5(2) + 6 + 3(2) \stackrel{?}{=} 22$

$22 = 22$ ✔

When an equation has a variable on both sides, add or subtract to get the variable on one side.

Solve: $-6m + 45 = 3m$

$-6m + 6m + 45 = 3m + 6m$ ← **Add 6m to each side.**

$45 = 9m$

$\frac{45}{9} = \frac{9m}{9}$

$5 = m$

Check: $-6m + 45 = 3m$

$-6(5) + 45 \stackrel{?}{=} 3(5)$

$15 = 15$ ✔

Solve each equation.

ATTACH WORK, MUST BE NEAT, EACH GROUP MEMBER MUST CONTRIBUTE, PUT NAME ON WORK

1. $a - 4a = 36$

$a =$ _____

2. $3b - 5 - 2b = 5$

$b =$ _____

3. $5n + 4 - 8n = -5$

$n =$ _____

4. $12k + 6 = 10$

$k =$ _____

5. $3(x - 4) = 15$

$x =$ _____

6. $y - 8 + 2y = 10$

$y =$ _____

7. $3(s - 10) = 36$

$s =$ _____

8. $-15 = p + 4p$

$p =$ _____

9. $2g + 3g + 5 = 0$

$g =$ _____

10. $6c + 4 - c = 24$

$c =$ _____

11. $3(x - 2) = 15$

$x =$ _____

12. $4y + 9 - 7y = -6$

$y =$ _____

13. $4(z - 2) + z = -13$

$z =$ _____

14. $24 = -2(b - 3) + 8$

$b =$ _____

15. $17 = 3(g + 3) - g$

$g =$ _____

16. $5(k - 4) + 3k = 4$

$k =$ _____

17. $8 - m - 3m = 16$

$m =$ _____

18. $6n + n + 14 = 0$

$n =$ _____

19. $7(p + 1) + p = 9$

$p =$ _____

20. $36 = 4(q - 5)$

$q =$ _____

21. $25 = 5(t + 2) - 2t$

$t =$ _____

TIP: for this. 5(x+2) use the "distributive property" to change it to 5x +10
that is, multiply the 5 times EACH term inside the parentheses.
Another example: -2(b-3) = -2(b) +-2(-3) = -2b + 6 SIGNS ARE IMPORTANT