**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_ Score:\_\_\_\_\_**

**U1 HW #3** *Solving Multi-Step Equations*

**Directions:** Solve the following equations showing all steps.

|  |  |  |
| --- | --- | --- |
| 1. $7x-3x=24$
 | 1. $6a+5a=-11$
 | 1. $-4n-2n=6$
 |
| 1. $5a+8+\left(-2a\right)=-7$
 | 1. $18=3x+4+2$
 | 1. $-2x-7-4x=17$
 |
| 1. $s+3s=-24$
 | 1. $-5n+4n-7=8$
 | 1. $x-4+3=-6$
 |
| 1. $6=4t-3t-2$
 | 1. $3\left(4x-2\right)=30$
 | 1. $-24=4\left(2+2x\right)$
 |
| 1. $-2\left(a+3\right)+4a=18$
 | 1. $28=5x+3\left(x+4\right)$
 | 1. $4x-3\left(x-2\right)=21$
 |

1. **Find and Fix the Mistake:** In the following problems, a common mistake has been made. Circle the mistake and describe the mistake in words. Then, solve the equation correctly.

|  |  |
| --- | --- |
| 1. $7+2\left(3x+4\right)=3$ Distribute the 2

$7+6x+4=3$ Combine like terms (7 & 4)  $11+6x=3$ Subtract 11 from both sides $6x=-8$ Divide both sides by 6 $x=-\frac{8}{6} $ Simplify the fraction $x=-\frac{4}{3}$ **Explanation of Mistake:****Solve Correctly:** | 1. $-2\left(y-3\right)+5=3$ Distribute the -2

$ -2y-6+5=3$ Combine like terms (-6 & 5)$ -2y-1=3 $Add 1 to both sides $-2y=4$ Divide both sides by -2$ y=-2$ **Explanation of Mistake:****Solve Correctly:** |
| 1. $-\left(2x-7\right)=14$ Distribute the negative sign (-1)

$ 5-2x-7=14$ Combine like terms (5 & -7)$ -2-2x=14$ Add 2 to both sides$ -2x=16$ Divide both sides by -2 $x=-8$ **Explanation of Mistake:****Solve Correctly:** | 1. $\frac{1}{3}\left(x+15\right)=11$ Distribute the $\frac{1}{3}$

$\frac{1}{3}x+5=11$ Subtract 5 from both sides  $\frac{1}{3}x=6$ Divide both sides by 3 $ x=2$ **Explanation of Mistake:****Solve Correctly:** |