

1st 5
SOLVE.

1. $-2x + 4 = 12$

$$\begin{array}{r} -4 \quad -4 \\ \hline -2x = 8 \\ \hline x = -4 \end{array}$$

2. $-\frac{x}{3} + 2 = 4$

$$\begin{array}{r} -2 \quad -2 \\ \hline -\frac{x}{3} = 2 \\ \hline -3 \cdot \frac{x}{3} = 2 \cdot 3 \\ \hline x = -6 \end{array}$$

SIMPLIFY.

3. $3a + 5 - x + 7x + 2a$

$$a + 6x + 5$$

4. $4a + 3 - 2y - 5a - 7 + 4y$

$$-a + 2y - 4$$

Numbers Day 3

1) $\frac{r}{10} + 4 = 5$ {10}	2) $\frac{n}{2} + 5 = 3$ {-4}	9) $\frac{-5+x}{22} = -1$ {-17}	10) $4n - 9 = -9$ {0}
3) $3p - 2 = -29$ {-9}	4) $1 - r = -5$ {6}	11) $\frac{x+9}{2} = 3$ {-3}	12) $\frac{-12+x}{11} = -3$ {-21}
5) $\frac{k-10}{2} = -7$ {-4}	6) $\frac{n-5}{2} = 5$ {15}	13) $\frac{-4+x}{2} = 6$ {16}	14) $-5 + \frac{n}{3} = 0$ {15}
7) $-9 + \frac{n}{4} = -7$ {8}	8) $\frac{9+m}{3} = 2$ {-3}		

Numbers Day 3

15) $\frac{p}{4} + 8 = 7$ {-4}	16) $9 + \frac{n}{4} = 15$ {24}	23) $\frac{m-13}{2} = -8$ {-3}	24) $-5x + 13 = -17$ {6}
17) $6 + \frac{x}{2} = 4$ {-4}	18) $\frac{b+11}{3} = -2$ {-17}	25) $\frac{k+10}{-2} = 5$ {-20}	26) $\frac{p+8}{-2} = 10$ {-28}
19) $\frac{a-10}{3} = -4$ {-2}	20) $-12r + 4 = 100$ {-8}	27) $-14r - 19 = 303$ {-23}	28) $\frac{x}{-4} - 5 = -8$ {12}
21) $\frac{m}{16} - 9 = -8$ {16}	22) $-7 + 4r = -15$ {-2}		

Numbers Day 3

25) $\frac{k+10}{-2} = 5 \cdot -2$

$$\begin{array}{r} k+10 = -10 \\ -10 \quad -10 \\ \hline k = -20 \end{array}$$

Numbers Day 3

22) $-7 + 4r = -15$

$$\begin{array}{r} +7 \quad +7 \\ \hline 4r = -8 \\ \hline \frac{4r}{4} = \frac{-8}{4} \\ \hline r = -2 \end{array}$$

Numbers Day 3

16) $9 + \frac{n}{4} = 15$

$$\begin{array}{r} -9 \quad -9 \\ \hline \frac{n}{4} = 6 \\ \hline \frac{4}{1} \cdot \frac{n}{4} = 6 \cdot 4 \\ \hline n = 24 \end{array}$$

Numbers Day 3

$$12) \frac{-12 + x}{11} = -3 \cdot 11$$

$$-12 + x = -33$$

$$\begin{array}{r} +12 \\ -12 + x = -33 \\ \hline x = -21 \end{array}$$

Numbers Day 3

$$20) -12r + 4 = 100$$

$$\begin{array}{r} -4 \\ -12r + 4 = 100 \\ \hline -12r = 96 \end{array}$$

$$\begin{array}{r} -12 \\ -12r = 96 \\ \hline r = -8 \end{array}$$

Numbers Day 3

$$9) \frac{-5 + x}{22} = -1 \cdot 22$$

$$-5 + x = -22$$

$$\begin{array}{r} +5 \\ -5 + x = -22 \\ \hline x = -17 \end{array}$$

Numbers Day 3

$$16) 9 + \frac{n}{4} = 15$$

$$\begin{array}{r} -9 \\ 9 + \frac{n}{4} = 15 \\ \hline \frac{n}{4} = 6 \end{array}$$

$$\begin{array}{r} 4 \\ \frac{n}{4} = 6 \\ \hline n = 24 \end{array}$$

Numbers Day 3

$$7) -9 + \frac{n}{4} = -7$$

$$\begin{array}{r} +9 \\ -9 + \frac{n}{4} = -7 \\ \hline \frac{n}{4} = 2 \end{array}$$

$$\begin{array}{r} 4 \\ \frac{n}{4} = 2 \\ \hline n = 8 \end{array}$$

Numbers Day 3

Solving Multi-Step Equations

- Steps for Solving Multi-Step Equations
 1. Clear any decimals/fractions.
 2. Use the Distributive Property to remove parentheses on each side.
 3. Combine like terms on each side.
 4. Undo addition or subtraction.
 5. Undo multiplication or division.

Numbers Day 3

• Combining Like Terms

- $2c + c + 12 = 78$

$$\begin{array}{r} 3c + 12 = 78 \\ \underline{-12 \quad -12} \\ 3c = 66 \\ \underline{\quad \quad \quad} \\ c = 22 \end{array}$$
- $4b + 16 + 2b = 46$

$$\begin{array}{r} 6b + 16 = 46 \\ \underline{-16 \quad -16} \\ 6b = 30 \\ \underline{\quad \quad \quad} \\ b = 5 \end{array}$$

Numbers Day 3

• Solve each equations. Check your answer.

- $3x - 4x + 6 = -2$

$$\begin{array}{r} -x + 6 = -2 \\ \underline{-6 \quad -6} \\ -x = -8 \\ \underline{-1 \quad -1} \\ x = 8 \end{array}$$
- $-3z + 8 + (-2z) = -12$

$$\begin{array}{r} -5z + 8 = -12 \\ \underline{-8 \quad -8} \\ -5z = -20 \\ \underline{-5 \quad -5} \\ z = 4 \end{array}$$

Numbers Day 3

Solving an Equation with Grouping Symbols

- $-2(b - 4) = 12$

$$\begin{array}{r} -2b + 8 = 12 \\ \underline{-8 \quad -8} \\ -2b = 4 \\ \underline{-2 \quad -2} \\ b = -2 \end{array}$$
- $15 = -3(x - 1) + 9$

$$\begin{array}{r} 15 = -3x + 3 + 9 \\ 15 = -3x + 12 \\ \underline{-12 \quad -12} \\ 3 = -3x \\ \underline{-3 \quad -3} \\ -1 = x \end{array}$$
- $3(k + 8) = 21$

$$\begin{array}{r} 3k + 24 = 21 \\ \underline{-24 \quad -24} \\ 3k = -3 \\ \underline{\quad \quad \quad} \\ k = -1 \end{array}$$

Numbers Day 3

- Solve $2(8 + p) = 22$

$$\begin{array}{r} 16 + 2p = 22 \\ \underline{-16 \quad -16} \\ 2p = 6 \\ \underline{\quad \quad \quad} \\ p = 3 \end{array}$$
- Solve $m + 5(m - 1) = 7$

$$\begin{array}{r} m + 5m - 5 = 7 \\ 6m - 5 = 7 \\ \underline{+5 \quad +5} \\ 6m = 12 \\ \underline{\quad \quad \quad} \\ m = 2 \end{array}$$

Numbers Day 3

PW 18

- Workbook p. 24 # 1, 4 - 19, 21, 23, 24

Numbers Day 3