

Foundations of Algebra

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Name _____

Unit 4 Review - Solving Equations

Date _____

Solve each equation.

$$\begin{array}{r} 1) \ -21 = a - 17 \\ +17 \quad +17 \\ \hline -4 = a \end{array}$$

$$\begin{array}{r} 2) \ 152 = -19n \\ -19 \quad -19 \\ \hline -8 = n \end{array}$$

$$\begin{array}{r} 3) \ 9 = \frac{x}{15} \\ \times 15 \quad \times 15 \\ \hline 135 = x \end{array}$$

$$\begin{array}{r} 4) \ 22 = v + 14 \\ -14 \quad -14 \\ \hline 8 = v \end{array}$$

$$\begin{array}{r} 5) \ 10 = \frac{r}{2} + 2 \\ -2 \quad -2 \\ \hline 8 = \frac{r}{2} \\ \times 2 \quad \times 2 \\ \hline 16 = r \end{array}$$

$$\begin{array}{r} 6) \ 9 = \frac{b}{4} + 9 \\ -9 \quad -9 \\ \hline 0 = \frac{b}{4} \\ \times 4 \quad \times 4 \\ \hline 0 = b \end{array}$$

$$\begin{array}{r} 7) \quad 4 - 5n = 26 \\ \quad \quad \quad +4 \\ \hline \quad 5n = 30 \\ \quad \quad \quad -5 \\ \hline \quad n = -6 \end{array}$$

$$\begin{array}{r} 8) \quad 2 - 5k = -68 \\ \quad \quad \quad -2 \\ \hline \quad -5k = -70 \\ \quad \quad \quad -5 \\ \hline \quad k = 14 \end{array}$$

$$\begin{array}{r} 9) \quad 2 - 8v = 6 - 6v + 4 \\ 2 - 8v = 10 \\ \quad \quad \quad +6v \\ \hline -2 - 2v = 10 \\ \quad \quad \quad -2 \\ \hline \quad -2v = 8 \\ \quad \quad \quad -2 \\ \hline \quad v = -4 \end{array}$$

$$\begin{array}{r} 10) \quad -5 + 4x = x + 7 \\ \quad \quad \quad -x \\ \hline \quad -5 + 3x = 7 \\ \quad \quad \quad +5 \\ \hline \quad 3x = 12 \\ \quad \quad \quad 3 \\ \hline \quad x = 4 \end{array}$$

$$\begin{array}{r} 11) \quad -180 = 6(6 + 6k) \\ -180 = 36 + 36k \\ \quad \quad \quad -36 \\ \hline \quad -216 = 36k \\ \quad \quad \quad 36 \\ \hline \quad -6 = k \end{array}$$

$$\begin{array}{r} 12) \quad 100 = 5(7n + 6) \\ 100 = 35n + 30 \\ \quad \quad \quad -30 \\ \hline \quad 70 = 35n \\ \quad \quad \quad 35 \\ \hline \quad 2 = n \end{array}$$

$$\begin{array}{r} 13) \quad 5(2a + 2) = 34 + 6a \\ 10a + 10 = 34 + 6a \\ \quad \quad \quad -6a \\ \hline \quad 4a + 10 = 34 \\ \quad \quad \quad -10 \\ \hline \quad 4a = 24 \\ \quad \quad \quad 4 \\ \hline \quad a = 6 \end{array}$$

$$\begin{array}{r} 14) \quad -18 - 5k = -7(k + 4) \\ -18 - 5k = -7k - 28 \\ \quad \quad \quad +5k \\ \hline \quad -18 = -2k - 28 \\ \quad \quad \quad +28 \\ \hline \quad 10 = -2k \\ \quad \quad \quad -2 \\ \hline \quad -5 = k \end{array}$$