

ALL PROBLEMS CAN BE COMPLETED ON THIS WORKSHEET

WS 3A.2 - More Solving One and Two-Step Equations

#1-16, Solve each equation.

$$1. \quad w - 7 = -21$$

$$\begin{array}{r} +7 \\ \hline w = -14 \end{array}$$

$$2. \quad w + 7 = -21$$

$$\begin{array}{r} -7 \\ \hline w = -28 \end{array}$$

$$3. \quad \frac{7w}{7} = \frac{-21}{7}$$

$$\begin{array}{r} w = -3 \end{array}$$

$$4. \quad \frac{w \cdot 7}{7} = -21 \cdot 7$$

$$\begin{array}{r} w = -147 \end{array}$$

$$5. \quad -8 + p = -24$$

$$\begin{array}{r} +8 \\ \hline p = -16 \end{array}$$

$$6. \quad -8 + p = -24$$

$$\begin{array}{r} +8 \\ \hline p = -16 \end{array}$$

$$7. \quad \frac{-8p}{-8} = \frac{-24}{-8}$$

$$\begin{array}{r} p = 3 \end{array}$$

$$8. \quad \frac{p \cdot (-8)}{-8} = -24 \cdot (-8)$$

$$\begin{array}{r} p = 192 \end{array}$$

$$9. \quad -2y + 5 = 17$$

$$\begin{array}{r} -5 \\ \hline -2y = 12 \end{array}$$

$$\begin{array}{r} \cancel{-2} \\ \hline y = -6 \end{array}$$

$$10. \quad -8m - 12 = 20$$

$$\begin{array}{r} +12 \\ \hline -8m = 32 \end{array}$$

$$\begin{array}{r} \cancel{-8} \\ \hline m = -4 \end{array}$$

$$11. \quad \frac{13}{+4} = \frac{a}{3} - 4$$

$$\begin{array}{r} 17 \cdot 3 = a \cdot 3 \\ 51 = a \end{array}$$

$$\begin{array}{r} a = 51 \\ \Rightarrow a = 51 \end{array}$$

$$12. \quad \frac{n}{-5} - 22 = -20$$

$$\begin{array}{r} +22 \\ \hline \cancel{-5} \cdot (-5) \\ \hline n = -10 \end{array}$$

$$\begin{array}{r} \cancel{n} \cdot (-5) \\ \hline \cancel{-5} = 2 \cdot (-5) \end{array}$$

$$13. \quad \frac{9}{-7} = \frac{7-j}{4}$$

$$\begin{array}{r} 2 \cdot (-4) \\ \hline -8 = j \end{array}$$

$$\Rightarrow j = -8$$

$$14. \quad \frac{1}{-1} - 4n = 65$$

$$\begin{array}{r} -4n = \frac{64}{-4} \\ n = -16 \end{array}$$

$$15. \quad \frac{4z}{-12} + 12 = -18$$

$$\begin{array}{r} \frac{4z}{-12} = \frac{-30}{4} \\ z = \frac{-30}{4} \end{array}$$

$$16. \quad \frac{8.35}{-1.25} = -1.25q - 2$$

$$\begin{array}{r} 10.35 = -1.25q \\ -8.28 = q \end{array}$$

$$\begin{array}{r} +2 \\ \hline \cancel{-1.25} = \cancel{-1.25} \\ -8.28 = q \end{array}$$

$$\begin{array}{r} +2 \\ \hline \cancel{-1.25} = \cancel{-1.25} \\ -8.28 = q \end{array}$$

17. Twelve decreased by the quotient of a number and -2 is 15. Find the number.

let n = the number

$$\begin{array}{r} 12 - \frac{n}{-2} = 15 \\ -12 \\ \hline \frac{n}{2} = 3 \cdot 2 \\ n = 6 \end{array}$$

The number is 6.

18. If 11.2 less than the average of 5 numbers is 27.75, what is the sum of the numbers?

let m = the sum of the 5 numbers

$$\begin{array}{r} \frac{m}{5} - 11.2 = 27.75 \\ +11.2 \quad +11.2 \\ \hline \frac{m}{5} = 38.95 \cdot 5 \\ m = 194.75 \end{array}$$

The sum of the numbers is 194.75.