Unit 6 Objective 2 Remediation

Solving Two-Step Equations

When solving equations we are **UNDOING** the order of operations. So, in most cases we will…

- Undo any addition and/or subtraction first using the opposite operation
- Undo any multiplication and/or division next using the opposite operation

Example One

Solve: $3x + 2 = 17$

$-2 \quad -2$ Subtract 2 from each side of the equation

$3x \quad = 15$

$\frac{3x}{3} = \frac{15}{3}$ Divide both sides of the equation by 3

$x = 5$

Example Two

Solve: $\frac{x}{3} - 4 = 1$

$+4 \quad +4$ Add 4 to each side of the equation

$\frac{x}{3} \quad = 5$

$(3)\frac{x}{3} = 5(3)$ Multiply both sides of the equation by 3

$x = 15$

Example Three

Solve: $5 - \frac{2}{3}x = -3$

$-5 \quad = -5$ Subtract 5 from each side of the equation

$-\frac{2}{3}x \quad = -8$

$\left(-\frac{3}{2}\right)\left(-\frac{2}{3}x\right) = (-8)\left(-\frac{3}{2}\right)$ Multiply both sides of the equation by $-\frac{3}{2}$

$1x = 12$

$x = 12$

Try These

1. $3x + 2 = 8$
2. $2y - 4 = 8$
3. $-2 + 7n = 33$
4. $20 - \frac{k}{5} = 17$
5. $6 = \frac{1}{4}m + 2$
6. $4 - 9w = -77$

What Do You Get When You . . .

1 Cross a fast dog with a bumblebee?

−16	−12	30	315	2	36	−15	15	−42	−18	−40	44	56	−42	−5	−5

2 Cross an airplane with a magician?

−16	98	−2	7	36	−27	−18	30	295	8	15	315	168	2	315	2	315

Solve each equation or problem and find your solution in the code. Each time the solution appears, write the letter of the exercise above it.

S. $2 + 9n = 74$

E. $-18y + 7 = -29$

H. $11 - 4d = 71$

C. $-8 + \frac{x}{7} = 16$

I. $-\frac{1}{3}p + 1 = 10$

U. $15 - \frac{w}{6} = 22$

G. $\frac{2}{5}y + 8 = 20$

A. $-12 + 5k = -92$

D. $-\frac{3}{8}x - 11 = 4$

F. $-28 = 13q - 2$

O. $30 = 10 + \frac{4}{3}m$

L. $-48 = -6y - 6$

B. $8 - \frac{5}{7}x = -32$

Z. $65 + 13t = 0$

N. $100 = 1 - \frac{11}{2}n$

Y. Mr. Mustard said: "Eight less than three times my age is 100." How old is Mr. Mustard?

R. You are a salesperson for Acme Toys. Every day you earn $30 plus two ninths of your sales. What dollar amount of sales do you need today to earn $100?