Alg 1 2.3

Solve equations involving more than one operation

Solve consecutive integer problems

Order of operations: what we DO

Solving: what we UNDO

Square puzzle (if time)

DO →

G e m A

← undo

$3(4+6)-2\cdot5$

$3\cdot10-2\cdot5$

$30+^{-}10$

$2x+5=13$

$-5 \quad -5$

$\frac{2x}{2}=\frac{8}{2}$ $x=4$

Solve each equation. Check your solution.

11. $3t + 7 = -8$

$-7 \quad -7$

$\frac{3t}{3} = \frac{-15}{3}$

$t = -5$

$3 \cdot -5 + 7 = -8$

$-15 + 7 = -8$

12. $8 = 16 + 8n$

$-16 \quad -16$

$\frac{-8}{8} = \frac{8n}{8}$

$-1 = n$

$8 = 16 + 8 \cdot -1$

$8 = 16 + -8$

13. $-34 = 6m - 4$

$+4 \quad +4$

$\frac{-30}{6} = \frac{6m}{6}$

$-5 = m$

$-34 = 6 \cdot -5 + -4$

$-34 = -30 + -4$

4. $\frac{3}{2}a - 8 = 11$

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

6. $\frac{c + 1}{-3} = -21$

7. NUMBER THEORY Twelve decreased by twice a number equals −34. Write an equation for this situation and then find the number.

$$12 - 2n = -34$$
$$-12 \qquad -12$$
$$-2n = -46$$
$$\frac{-2n}{-2} = \frac{-46}{-2}$$
$$n = 23$$

Write an equation and solve each problem.

24. Fourteen less than three fourths of a number is negative eight. Find the number.

25. Seventeen is thirteen subtracted from six times a number. What is the number?

$\frac{3}{4}n + -14 = -8$

$+14 \quad +14$

$\frac{\frac{3}{4}n}{\frac{3}{4}} = \frac{6}{\frac{3}{4}}$

$n = 8$

$17 = 6n + -13$

$+13 \quad +13$

$\frac{30}{6} = \frac{6n}{6}$

$n = 5$

Square puzzle (if time)

25.

17 ↓ 18 ↓

$(n) + (n+1) = 35$

$2n + 1 = 35$

$-1 \quad -1$

$\frac{2n}{2} = \frac{34}{2}$

$n = 17$

consecutive integers

$$\overset{44}{\downarrow}\quad\quad\overset{45}{\downarrow}$$
$$(n) + (n+1) = 89$$

$$2n + 1 = 89$$
$$-1 \quad -1$$
$$\frac{2n}{2} = \frac{88}{2}$$
$$n = 44$$