8. Solve each equation.
Verify the solution.

a) $\frac{p}{-3} + 9 = 3$ **b)** $\frac{t}{-6} + 12 = 18$

c) $-24 + \frac{w}{5} = -29$ **d)** $-17 + \frac{c}{-7} = -8$

9. For each sentence, write an equation.
Solve the equation to find the number.

a) Add 1 to a number divided by -3 and the sum is 6.

b) Subtract a number divided by 9 from 3 and the difference is 0.

c) Add 4 to a number divided by -2 and the sum is -3.

10. One-half of the team's supply of baseballs was taken from the dressing room to the dugout. During the game, 11 baseballs were caught by fans. At the end of the game, there were 12 baseballs left in the dugout. What was the team's original supply of baseballs?

a) Write an equation you can use to solve the problem.

b) Solve the equation.

c) Verify the solution.

11. **Assessment Focus** Five students in Mrs. Lamert's tutorial class after school are solving equations. She brought a bag of treats. Mrs. Lamert explained that if the 5 students shared the bag of treats equally, then gave one treat each to the teacher, each student would still have 9 treats. How many treats were in the bag? Here is the equation Jerry suggested: $\frac{n}{5} - 1 = 9$

a) Is Jerry's equation correct? Explain why or why not.

b) If your answer to part a is yes, solve the equation using algebra.
If your answer to part a is no, correct the equation, then solve the equation using algebra.

c) Verify the solution.

12. One-third of the Grade 8 students went to the track-and-field meet. Five track coaches went too. There were 41 people on the bus, not including the driver. How many students are in Grade 8?

a) Write an equation you can use to solve the problem.

13. Check each student's work below. Rewrite a correct and complete algebraic solution where necessary

a) Student A:

$$\frac{h}{-9} = 4$$
$$\frac{h}{-9} \times (-9) = 4 \times (-9)$$
$$\frac{-9h}{-9} = -36$$
$$h = -36$$

b) Student B:

$$\frac{t}{8} - 2 = 4$$
$$8 \times \frac{t}{8} - 2 = 4 \times 8$$
$$\frac{8t}{8} - 2 = 32$$
$$t - 2 = 32$$
$$t - 2 + 2 = 32 + 2$$
$$t = 34$$

c) Student C:

$$\frac{r}{-4} + 3 = 13$$
$$\frac{r}{-4} + 3 - 3 = 13 - 3$$
$$\frac{r}{-4} = 10$$
$$4 \times \frac{r}{-4} = 10 \times 4$$
$$r = 40$$

14. **Take It Further** Jonah used the equation $3 + \frac{n}{7} = 18$ to solve a word problem.

a) What might the word problem be?

b) Solve the problem.

c) Verify the solution.