Solving Equations with Fractions

Directions Write an equation for each statement. Then solve
the equation.

1. A number p multiplied by $\frac{1}{6}$ is 6.   _____

2. A number x multiplied by $\frac{1}{9}$ is 2.   _____

3. A number n multiplied by $\frac{9}{10}$ is 18.   _____

4. A number q multiplied by $\frac{3}{4}$ is −12.   _____

5. A number w multiplied by $\frac{2}{-3}$ is 6.   _____

Directions Solve the problems.

6. Alissa was elected president of the all-state science club, receiving exactly $\frac{2}{3}$ of all
votes cast. If she received 100 votes, what was the total vote for all candidates?

_____

7. Kyle hit 12 home runs in community baseball last summer, only $\frac{3}{4}$ as
many as Kara. How many home runs did Kara hit?

_____

8. A weather station in the Alps received 210 cm of snow in a recent winter, or $\frac{7}{10}$
of its average annual snowfall. What is the station's average annual snowfall?

_____

9. The school cafeteria ordered enough cartons of yogurt for Tuesday's
lunch. However, only 84 cartons, or $\frac{4}{5}$ of the order, were delivered on time.
How many cartons had the cafeteria ordered?

_____

10. A movie theater had a disappointing turnout for its 7 o'clock showing.
The box office sold only 120 tickets, filling $\frac{3}{7}$ of the seats in the theater.
How many seats does the theater have?

_____

Algebra

Solving Equations—More Than One Step

Directions Study the solution for each equation and tell whether it is *correct* or *incorrect*. If the solution is incorrect, explain why.

1. $3n + 1 = 28$

    Step 1 $3n + 1 - 1 = 28 - 1$ _____

                  Simplify: $3n = 27$ _____

    Step 2 $\frac{3n}{3} = \frac{27}{3}$ _____

                  Simplify: $n = 9$ _____

2. $4k - 1 = 15$

    Step 1 $4k - 1 + 1 = 15$ _____

                  Simplify: $4k = 15$ _____

    Step 2 $\frac{4k}{4} = \frac{15}{4}$ _____

                  Simplify: $k = \frac{15}{4}$ (or $3\frac{3}{4}$) _____

3. $\frac{2}{3}r - 2 = 20$

    Step 1 $\frac{2}{3}r - 2 + 2 = 20 + 2$ _____

                  Simplify: $\frac{2}{3}r = 22$ _____

    Step 2 $(\frac{3}{2})\frac{2}{3}r = \frac{22}{1}(\frac{3}{2})$ _____

                  Simplify: $r = 33$ _____

Directions Solve the problems.

4. Terry says, "I have 8 cousins."

Rita says, "Then you have one less than three times as many as I do." How many cousins does Rita have?

_____

5. Yesterday at the museum, 602 people viewed the dinosaur exhibit. This attendance was 10 less than 3 times the number of people who viewed the wetlands exhibit. How many people viewed the wetlands exhibit yesterday?

_____

▶ Algebra