

LESSON PRACTICE

16B

For each question, list all the possible equations, and then use the best one to find the answer.

1. The ratio of the fertilizer was five parts nitrogen to ten parts all other ingredients. The farmer bought 135 pounds of fertilizer. How many pounds of nitrogen did he get?
2. The ratio of high school students who were home schooled to those who attended other schools was three to seven. If there were 90 home schoolers, what was the total number of high school students?
3. The ratio of time Mary spends on sports compared to school work is two to three. If she spends four hours a day practicing sports, how many hours does she spend studying?
4. The chosen color was three parts forest green to one part antique ivory. Julia needs eight gallons of paint to do the job. How many quarts of each color should she buy to do the job?
5. The ratio of average snowfall in the two towns is four to five. If the first town usually gets 22 inches a year, what is the average snowfall in the second town?

For #6–10, use the atomic weight tables.

6. There are 480 grams of CF_2Cl_2 . What is the mass of the carbon?

7. What is the mass of fluorine in 480 grams of CF_2Cl_2 ?

8. What is the mass of chlorine in 480 grams of CF_2Cl_2 ?

9. There are 550 grams of K_2S . What is the mass of the potassium?

10. What is the mass of sulfur in 550 grams of K_2S ?

SYSTEMATIC REVIEW

16E

For #1–3: Fans at the stadium preferred football to soccer by three to one. If 11,300 fans liked soccer, how many were at the stadium?

1. List all the possible equations.
2. Tell which one will be used, and why.
3. Solve.

For #4–6: Sulfur and hydrogen are present in 442 grams of H_2S .

4. List all the possible equations.
5. What is the mass of the sulfur?
6. What is the mass of the hydrogen?

For #7–9: Iron and nitrogen are present in 882 grams of NFe_2 .

7. List all the possible equations.
8. What is the mass of the iron?
9. What is the mass of the nitrogen?

10. Solve for F. $\frac{1}{F} = \frac{1}{A} + \frac{1}{B}$

11. Solve for E. $\frac{AB}{XY} + \frac{CD}{E} = 0$

For #12–13: One night 5,435,960 Israelites left Egypt through the Red Sea. 45% of them were male.

12. How many men were there?
13. What is the ratio of women to men?

For #14–16, use the atomic weight table. Round answers to the nearest whole percent.

14. Find the percentage of sodium in NaOH.
15. Find the percentage of oxygen in NaOH.
16. Find the percentage of hydrogen in NaOH.
17. Tell the nature of the solution to $X^2 - 2/3X = 4/3$ using the discriminant.
18. Solve to find the exact root(s) of #17. Factor when possible.

Solve for X.

$$19. 3^2 - X = 1.25X - 8.4$$

$$20. \frac{X}{2} + 15 = \frac{X}{3} + X$$