Rewrite each expression using the distributive property.

1. $8(5 + 2) =$

2. $5(4 - 3 + 2) =$

3. $9(C + D) =$

4. $5(2C + 4D) =$

5. $3(X + Y + 4X) =$

6. $-2(3X + 2Y + Y) =$

Rewrite each expression using the distributive property in reverse. (Find the GCF.)

7. $8X + 12Y = 4(\quad + \quad)$

8. $-7X - 21Y =$

9.   18A + 24B =

10.   8X + 10 = 16

11.   6A + 3 = 15

12.   8A + 10 = 20

Simplify each equation using the greatest common factor, then solve for the unknown.

13.   8X + 32 = 40

14.   18Y + 27 = 45

15.   15X − 10 + 5X = 25

16.   9C − 6 − 12C = 18

17.   14M − 42 + 56M = 28

18.   6A − 16 − 4A = 20

Distribute.

1. $4(A + B + 3) =$

2. $5(X - Y + 6 + Z) =$

3. $3(2Q - 4 + 3T + 7) =$

4. $2(2X + 3Y - 5) =$

Find the greatest common factor (reverse of distributing).

5. $15Y + 30X = 10$

6. $12Q + 6Y = 15$

7. $24Q + 18Y = 30$

8. $36A - 14B = 10$

Larger or smaller? (Use <, >, or = in the oval.)

9. $3 - 9 \bigcirc |4 + 1^2|$

Divide by the greatest common factor (GCF) and solve for the unknown.

10. $4X - 16 = 24$

11. $30 - 42Y = 18$

12. $-24 + 56 = 16Q$

13. $-36 = 72A + 45$

14.   Find the least common multiple (LCM) of 10 and 100.

15.   Multiply this equation by the answer to #14 and solve: $.2X -.03 = .97$

16.   Find the LCM of 3, 4, and 6.

17.   Multiply this equation by the answer to #16 and solve: $\frac{3}{4} + \frac{1}{3}Q = \frac{5}{6}$

18.   Find the LCM of 10 and 100.

19.   Multiply this equation by the answer to #18 and solve: $-.7A + .8A = .12$

20.   Divide 75.6 feet of fence by 4 to find the dimensions of a square garden enclosed by the fence.

Distribute.

1. $3(A - B - 2) =$

2. $5(3A - 9 + 2A) =$

3. $Q(X + 3) =$

4. $-(-A - B + 2C) =$

Find the greatest common factor (reverse of distributing).

5. $10X - 25Y = 40$

6. $24A + 12B = 36$

7. $-14Q - 21D = -42$

8. $3X + 4XY = 7X$

Divide by the greatest common factor (GCF) and solve for the unknown.

9. $22X + 33 = 44$

10. $7Q - 15 = 9 - 5Q$
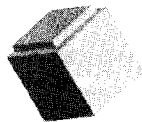   (*Hint:* First combine like terms.)

11. $30Y - 10 = 10$

12. $56B - 49 = 28$

13. Find the least common multiple (LCM) of 10 and 100.

14. Multiply this equation by the answer to #13 and solve:
    $.3X - 1.2 = .34$

15. Find the LCM of 4, 6, and 10.

16. Multiply this equation by the answer to #15 and solve: $-\frac{3}{4} + \frac{1}{6}R = \frac{7}{10}$

17. Gum balls are 5¢ apiece. How many can Zarah buy with $3.75?

QUICK REVIEW

A number may be expressed as a fraction, a decimal, or a percent.

EXAMPLE 1

Write $\frac{1}{2}$ as a decimal and a percent. $\frac{1}{2} = \frac{50}{100} = .50 = 50\%$

Write 85% as a decimal and a fraction. $85\% = .85 = \frac{85}{100} = \frac{17}{20}$

Write 250% as a decimal and a fraction. $250\% = 2.50 = \frac{250}{100} = 2\frac{1}{2}$

Fill in the blanks.

18. $\frac{1}{4} = \frac{}{100} = .\_\_\_ = \_\_\_\%$ 19. $40\% = .\_\_\_ = \frac{}{100} = \_\_\_$

20. $125\% = \_\_\_ = \frac{}{100} = 1\frac{}{}$