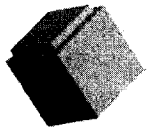


QUICK REVIEW

Least common multiple (LCM) may be found without listing the multiples.

EXAMPLE 1 Find the LCM of 15 and 18. First list the prime factors of each number.

$15 = 3 \times 5$
$18 = 2 \times 3 \times 3$

$LCM = 2 \times 3 \times 3 \times 5 = 90$

The LCM must contain each of the factors in the original numbers. The 3 must be used twice because that is the most number of times it is used in one number.

You may check by division to see that 15 and 18 are both factors of 90.

EXAMPLE 2 Find the LCM of 12 and 25. First list the prime factors of each number. We use 2 and 5 twice as factors because they are used twice in the original numbers.

$12 = 2 \times 2 \times 3$
$25 = 5 \times 5$
$LCM = 2 \times 2 \times 3 \times 5 \times 5 = 300$

You may check by division to see that 12 and 25 are both factors of 300.

Use the factoring method to find the LCM.

1. 16 and 18

2. 10 and 14

3. 24 and 50

Use **PARA**chute **EX**pert **M**y **D**ear **A**unt **S**ally to simplify each expression.

4. $4 \cdot 8 + 3^2 =$

5. $10 \cdot 4^2 - 25 =$

6. $7^2 - 9 \div 2 =$

7. $18 \cdot 2 + 5^2 - 11 =$

8. $15 \div 3 \cdot 8 + 10 =$

9. $(-5)^2 + (9 + 4^2) =$

10. $9^2 + 48 \div 12 - 3^3$

11. $|4^2 - 9| + (8 \div 4)^2 =$

12. $|3^2 - 5^2| - (15 \div 3)^3 + 18 =$

13. $|10^2 - 5^2| + |-8 + 2^2| =$

14. $|18 - 36| + (|3 - 5^2| - 15)^2 =$

15. $|(-10)^2 - 9| - |2^4 - 5^2| =$

SYSTEMATIC REVIEW

Use the correct order of operations to simplify.

1. $4 \cdot 7 + 3^2 =$

2. $5^2 + 8 \div 2 =$

3. $12^2 \times (2 + 3) - 4 =$

4. $9 \times 1^2 - 8 =$

5. $14 \div 2 - 1 \times 6 =$

6. $6 + 28 \div 7 - 4^2 =$

7. $(-3)^2 \div 9 + 6 =$

8. $|6 \div (-2)| \times 5 + 3^2 =$

Solve.

9. $\frac{3}{8} \times \frac{2}{5} \times \frac{2}{3} =$

10. $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} =$

11. List the prime factors of 64.

12. List the prime factors of 81.

13. Reduce $\frac{32}{48}$ using the GCF.

14. Find the LCM of 24 and 36.

Find the same denominator and divide the numerators.

15. $\frac{2}{3} \div \frac{2}{7} =$

To divide, multiply by the reciprocal.

16. $\frac{2}{3} \div \frac{2}{7} =$

QUICK REVIEW

There are two ways to determine where to put the decimal in the answer, or product, when multiplying.

EXAMPLE 1

$$\begin{array}{r} .24 \\ \times\ .3 \\ \hline .072 \end{array}$$

Ignore the decimal point when multiplying, then think, "1/100 x 1/10 = 1/1000." The answer must be in thousandths and have three decimal places.

EXAMPLE 2

$$\begin{array}{r} .24 \\ \times\ .32 \\ \hline 48 \\ 72 \\ \hline .0768 \end{array}$$

Line up the decimal points when setting up the problem. After multiplying, count the total number of decimal places in the two factors and give the product the same number of decimal places as that total.

Multiply.

17. .7 x .3 =

18. 2.4 x 1.2 =

19. 1.3 x 2.1 =

20. .4 x 3.2 =

SYSTEMATIC REVIEW

Use the correct order of operations to simplify. See Lesson 1A for review of negative numbers with exponents.

1. $-4^2 + (7 - 3)^2 - |-2| =$

2. $4(10 - 3) - 5(6) + 8 \div 2 =$

3. $-19 - (7)(-2) + 6^2 =$

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

5. $11^2 \div 4 + \frac{2}{3} =$

6. $5 \times 3 + 4^2 - 7 + (-8 \div 4) =$

7. $-5^2 + (-5)^2 =$

8. $|(9^2 \div 9) \div 3)| =$

Solve.

9. $\frac{2}{5} \times \frac{7}{8} \times \frac{4}{7} =$

10. $\frac{5}{24} + \frac{9}{32} =$

Fill in the ovals with = (equals) or ≠ (is not equal to) and answer the questions.

11. $(3 \times 4) \times 6 \bigcirc 3 \times (4 \times 6)$

12. Is multiplication associative?

13. $10 - (8 - 6) \bigcirc (10 - 8) - 6$

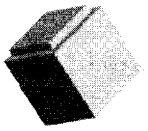
14. Is subtraction associative?

Find the same denominator and divide the numerators.

15. $1\frac{5}{7} \div 1\frac{3}{4} =$

To divide, multiply by the reciprocal.

16. $1\frac{5}{7} \div 1\frac{3}{4} =$



QUICK REVIEW

To divide decimals, first multiply both terms by the number that will make the divisor a whole number.

EXAMPLE 1

$.4\overline{)3.6}$ Multiply .4 and 3.6 by 10, then divide as usual. The decimal in the answer goes directly over the decimal below.

$4.\overline{)36.}$ $\quad 9.$

EXAMPLE 2 $.35\overline{)10.50}$ $\quad 30.$ Both .35 and 10.5 were multiplied by 100.

Divide. If necessary, add zeros and continue dividing until you find the answer to the nearest hundredth.

17. $2.3 \div .06 =$

18. $2.5 \div .5 =$

19. $2.5 \div .05 =$

20. $1.06 \div 5.3 =$