

 **Module Test** **A** **Module 4** 

Find the GCF of each set of numbers.

1. 9 and 81  
**9**

2. 121 and 154  
**11**

3. 24, 52, and 92  
**4**

Determine whether each number is prime or composite.

4. 33  
**composite**

5. 83  
**prime**

6. 102  
**composite**

Write each fraction in simplest form.

7.  $\frac{16}{24}$   
 **$\frac{2}{3}$**

8.  $\frac{100}{250}$   
 **$\frac{2}{5}$**

9.  $\frac{90}{126}$   
 **$\frac{5}{7}$**

Find the LCM of each set of numbers.

10. 8 and 64  
**64**

11. 144 and 180  
**720**

12. 28, 56, and 96  
**672**

Circle the correct answer for each problem.

13. The LCM of 52 and 78 is

a. 13

b. 26

c. 130

d. 156

**156**

14.  $14\frac{1}{2}$  is equivalent to

a.  $\frac{14}{2}$ b.  $\frac{29}{2}$ c.  $\frac{27}{2}$ d.  $\frac{16}{2}$  **$\frac{29}{2}$**

15.  $\frac{71}{12}$  is equivalent to

a.  $5\frac{9}{12}$

b.  $5\frac{11}{12}$

c.  $7\frac{1}{12}$

d.  $7\frac{10}{12}$

$5\frac{11}{12}$

16. Which fraction is in simplest form?

a.  $\frac{48}{59}$

b.  $\frac{28}{40}$

c.  $\frac{18}{27}$

d.  $\frac{55}{65}$

$\frac{48}{59}$

17. Which of the following is equivalent to 80%?

a. 0.008

b. 0.080

c.  $\frac{8}{100}$

d.  $\frac{8}{10}$

$\frac{8}{10}$

18. The number 36 has \_\_\_\_\_ factors.

a. 7

b. 8

c. 9

d. 10

9

**Answer each question. Explain the necessary steps.**

19. The local gym has three aerobics classes that begin at different times. Class A starts every 20 minutes, Class B starts every 30 minutes, and Class C starts every 45 minutes. All three classes begin at 8:00 A.M. How long will it take before all three classes start at the same time?

**Possible answer: The LCM of 20, 30, and 45 is the number of minutes before all three classes start at the same time again.**

$$20 = 2 \times 2 \quad \times 5$$

$$30 = 2 \quad \times 3 \quad \times 5$$

$$45 = \quad \quad 3 \times 3 \times 5$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$\text{LCM} = 2 \times 2 \times 3 \times 3 \times 5 = 180.$$

**It will take 180 minutes, or three hours.**

20. Farmer Bob is putting together vegetable plants to sell as vegetable gardens. He has 36 pepper plants, 42 asparagus plants, and 48 tomato plants. He wants to make as many identical gardens as possible without having any plants left over. If pepper plants cost \$3 each, asparagus plants cost \$4 each, and tomato plants cost \$5 each, how much would each garden cost? How many of each kind of plant would be in each garden?

**Possible answer: The GCF of 36, 42, and 48 is the number of identical gardens.**

$$\begin{array}{l} 36 = \boxed{2} \times \quad \quad \quad \times \boxed{3} \times 3 \\ 42 = \boxed{2} \quad \quad \quad \times \boxed{3} \times 7 \\ 48 = \boxed{2} \times 2 \times 2 \times 2 \times \boxed{3} \end{array}$$

$$\text{GCF} = 2 \times 3 = 6$$

**There are six identical gardens.**

**To find the number of plants in each garden, I divide the number of each plant by the GCF.**

$$36 \div 6 = 6 \text{ pepper plants} \quad 42 \div 6 = 7 \text{ asparagus plants} \quad 48 \div 6 = 8 \text{ tomato plants}$$

**Each garden has six pepper plants, seven asparagus plants, and eight tomato plants.**

**To find the cost of a garden, I multiply the number of each plant by the cost per plant.**

$$\text{Cost} = (6 \times 3) + (7 \times 4) + (8 \times 5) = 18 + 28 + 40 = 86$$

**The cost of a garden is \$86.**

