



## Module Test

## B

## Module 4



Find the GCF of each set of numbers.

1. 10 and 100  
**10**

2. 189 and 207  
**9**

3. 36, 54, and 72  
**18**

Determine whether each number is prime or composite.

4. 21  
**composite**

5. 129  
**composite**

6. 89  
**prime**

Write each fraction in simplest form.

7.  $\frac{21}{28}$   
 **$\frac{3}{4}$**

8.  $\frac{108}{180}$   
 **$\frac{3}{5}$**

9.  $\frac{80}{280}$   
 **$\frac{2}{7}$**

Find the LCM of each set of numbers.

10. 7 and 49  
**49**

11. 128 and 160  
**640**

12. 32, 64, and 72  
**576**

Circle the correct answer for each problem.

13. The LCM of 20 and 45 is

a. 180  
**180**

b. 30

c. 90

d. 5

14.  $12\frac{2}{3}$  is equivalent to

a.  $\frac{14}{3}$

b.  $\frac{17}{3}$

c.  $\frac{34}{3}$

d.  $\frac{38}{3}$   
 **$\frac{38}{3}$**

15.  $\frac{65}{7}$  is equivalent to

a.  $6\frac{2}{7}$

b.  $6\frac{5}{7}$

c.  $9\frac{2}{7}$

d.  $9\frac{4}{7}$

$9\frac{2}{7}$

16. Which fraction is in simplest form?

a.  $\frac{20}{30}$

b.  $\frac{31}{41}$

c.  $\frac{49}{56}$

d.  $\frac{57}{76}$

$\frac{31}{41}$

17. Which of the following is equivalent to 60%?

a.  $\frac{6}{100}$

b.  $\frac{60}{100}$

c. 0.006

d. 0.060

$\frac{60}{100}$

18. The number 24 has \_\_\_\_\_ factors.

a. 7

b. 8

c. 9

d. 10

8

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

19. The school fair has a magic show, a comedy show, and a singing contest. The magic show begins every 25 minutes, the comedy show begins every 30 minutes, and the singing contest begins every 60 minutes. All three shows begin at noon. How often will all three shows start at the same time?

**Possible answer: The LCM of 25, 30, and 60 is the number of minutes before all three shows start at the same time again.**

$$25 = 5 \times 5$$

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

$$60 = 2 \times 2 \times 3 \times 5$$

$$\begin{array}{ccccccc} \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & & \\ \end{array}$$

$$\text{LCM} = 2 \times 2 \times 3 \times 5 \times 5 = 300$$

**All three shows will begin at the same time every 300 minutes or five hours.**

20. Mr. Milton is filling supply cartons for his office. He has 32 pencils, 40 pens, and 48 notepads. He wants to make as many cartons as possible with the same supplies in each. No supplies can be left over. If pencils cost \$2 each, pens cost \$4 each, and notepads cost \$6 each, how much would each carton cost? How many of each kind of supplies would be in each carton?

**Possible answer: The GCF of 32, 40, and 48 is the number of identical cartons.**

$$\begin{aligned} 32 &= \boxed{2} \times \boxed{2} \times \boxed{2} \times 2 \times 2 \\ 40 &= \boxed{2} \times \boxed{2} \times \boxed{2} \times 2 \times 2 \times 5 \\ 48 &= \boxed{2} \times \boxed{2} \times \boxed{2} \times 2 \times 2 \times 3 \end{aligned}$$

$$\text{GCF} = 2 \times 2 \times 2 = 8$$

**There are eight identical cartons.**

**To find the number of supplies in each carton, I divide the number of each supply item by the GCF.**

$$32 \div 8 = 4 \text{ pencils} \qquad 40 \div 8 = 5 \text{ pens} \qquad 48 \div 8 = 6 \text{ notepads}$$

**Each carton has four pencils, five pens, and six notepads.**

**To find the cost of a carton, I multiply the number of each supply item by the cost per supply item.**

$$\text{Cost} = (4 \times 2) + (5 \times 4) + (6 \times 6) = 8 + 20 + 36 = 64$$

**The cost of a carton is \$64.**

