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Chapter 4 - Fractions and Decimals - Mid-Chapter Quiz: Lessons 4-1 through 4-3

Identify the common factors of each set of numbers.

1. 3, 9

List the factors by pairs for each number. Then circle the common factors.

Factors of 3		Factors of 9
①×③		①×9 ③×3

The common factors are 1 and 3.

1, 3

2. 11, 33, 55

List the factors by pairs for each number. Then circle the common factors.

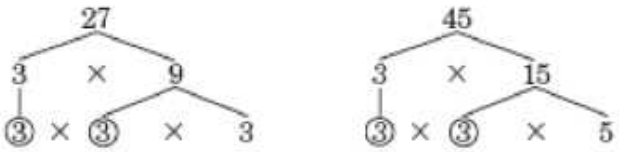
Factors of 11		Factors of 33		Factors of 55
①×⑪		①×33 3×⑪		①×55 5×⑪

The common factors are 1 and 11.

1, 11

Find the GCF of each set of numbers.

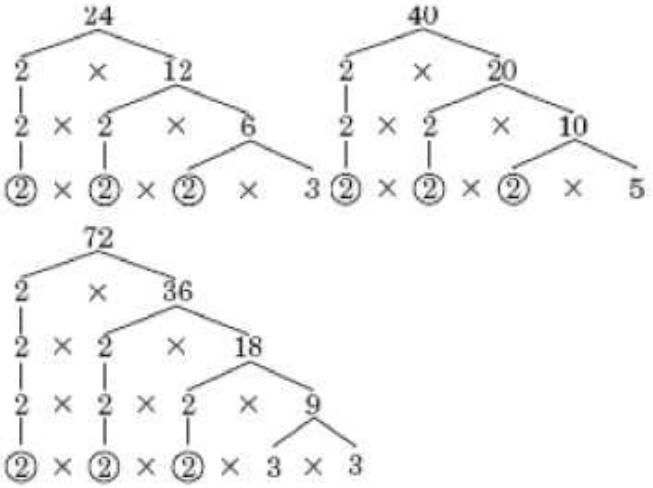
3. 27, 45



The common prime factors are 3 and 3. So, the GCF of 27 and 45 is 3×3 or 9.

9

4. 24, 40, 72



The common prime factors are 2, 2, and 2. So, the GCF of 24, 40, and 72 is 8.

8

5. **MULTIPLE CHOICE** The table shows the number of shrimp ordered at a restaurant for three days.

Day	Shrimp
Monday	56
Tuesday	21
Wednesday	42

Each order contains the same number of shrimp. What is the greatest possible number of shrimp in each order?

A 8
B 7
C 6
D 3

$$56 = 4 \times 14$$
$$= 2 \times 2 \times 2 \times \boxed{7}$$
$$21 = 3 \times \boxed{7}$$
$$42 = 6 \times 7$$
$$= 2 \times 3 \times \boxed{7}$$

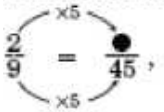
The greatest number of shrimp in each order is the GCF of 56, 21, and 42, which is 7. So, B is the correct answer.

B

Replace each ■ with a number so the fractions are equivalent.

6. $\frac{2}{9} = \frac{\blacksquare}{45}$

Since $9 \times 5 = 45$, multiply the numerator and denominator by 5.

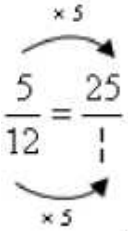


so $\frac{2}{9} = \frac{10}{45}$.

10

7. $\frac{5}{12} = \frac{25}{\blacksquare}$

Since $5 \times 5 = 25$, multiply the numerator and the denominator by 5.

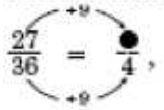


so $\frac{5}{12} = \frac{25}{60}$.

60

8. $\frac{27}{36} = \frac{\blacksquare}{4}$

Since $36 \div 9 = 4$, divide the numerator and the denominator by 9.

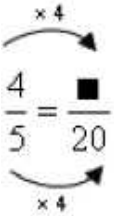


so $\frac{27}{36} = \frac{3}{4}$.

3

9. **GRADES** On a quiz, Marta answered 4 out of 5 questions correctly. If each question is worth the same amount of points and the total number of points is twenty, what was Marta's score?

Since $4 \times 5 = 20$, multiply the numerator and the denominator by 4.



so $\frac{4}{5} = \frac{16}{20}$.

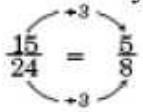
So, Marta's score on the quiz was 16.

16

Write each fraction in simplest form. If the fraction is already in simplest form, write *simplest form.*

10. $\frac{15}{24}$

Divide by a common factor.

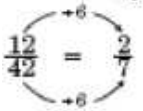


Since 5 and 8 have no common factor greater than 1, the fraction $\frac{5}{8}$ is in simplest form.

$\frac{5}{8}$

11. $\frac{12}{42}$

Divide by a common factor.



Since 2 and 7 have no common factor greater than 1, the fraction $\frac{2}{7}$ is in simplest form.

$\frac{2}{7}$

12. $\frac{9}{14}$

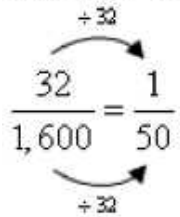
$\frac{9}{14}$ is in simplest form.

simplest form

13. **RAINFALL** The world's driest city is Aswan, Egypt, which only receives an average of $\frac{32}{1,600}$ inches of rain each year. Write this fraction in simplest form.

Write $\frac{32}{1,600}$ in simplest form.

The GCF of 32 and 1,600 is 32.



$\frac{1}{50}$

Write each mixed number as an improper fraction.

14.

$3\frac{5}{6}$

$3\frac{5}{6} = \frac{(3 \times 6) + 5}{6} = \frac{23}{6}$

$\frac{23}{6}$

15. $7\frac{3}{5}$

$7\frac{3}{5} = \frac{(7 \times 5) + 3}{5} = \frac{38}{5}$

$\frac{38}{5}$

16. $8\frac{4}{9}$

$8\frac{4}{9} = \frac{(8 \times 9) + 4}{9} = \frac{76}{9}$

$\frac{76}{9}$

17. **MULTIPLE CHOICE** A local newspaper is reducing the width of its paper by $1\frac{3}{4}$ inches. What is this width as an improper fraction?

F $\frac{4}{3}$

G $\frac{8}{4}$

H $\frac{7}{3}$

J $\frac{7}{4}$

$1\frac{3}{4} = \frac{(1 \times 4) + 3}{4} = \frac{7}{4}$

The correct answer is J.

J

18.

BAKING Express the amount of butter in the table as an improper fraction.

Ingredient	Amount
flour	$2\frac{3}{4}$
butter	$1\frac{1}{3}$
chocolate chips	$1\frac{1}{2}$

$$1\frac{1}{3} = \frac{(1\times 3)+1}{3} = \frac{4}{3}$$

$\frac{4}{3}$

Write each improper fraction as a mixed number or a whole number.

19. $\frac{37}{9}$

Divide 37 by 9.

$$9\overline{)37}\quad 4\frac{1}{9}$$

$$-\underline{36}$$

$$1$$

So, $\frac{37}{9}$ can be written as $4\frac{1}{9}$.

$4\frac{1}{9}$

20. $\frac{69}{8}$

Divide 69 by 8.

$$8\overline{)69}\quad 8\frac{5}{8}$$

$$-\underline{64}$$

$$5$$

So, $\frac{69}{8}$ can be written as $8\frac{5}{8}$.

$8\frac{5}{8}$

21. $\frac{42}{14}$

Divide 42 by 14.

$$14\overline{)42}\quad 3$$
$$-42$$
$$0$$

So, $\frac{42}{14}$ can be written as 3.

3

22. **WHALES** One of the world's heaviest whales is the Fin Whale, which weighs $\frac{248}{5}$ tons. Write this weight as a mixed number or a whole number.

Divide 248 by 5.

$$5\overline{)248}\quad 49\frac{3}{5}$$
$$-20$$
$$48$$
$$-45$$
$$3$$

So, the fin whale weighs $49\frac{3}{5}$ tons.

$49\frac{3}{5}$ tons