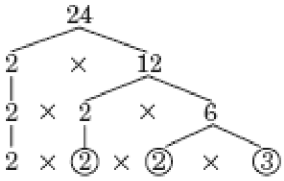
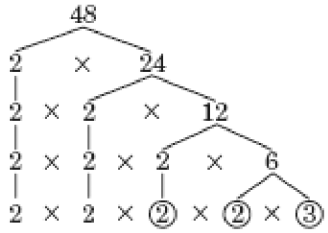
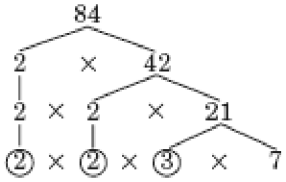
Name:

Chapter 4 - Fractions and Decimals - Practice Test

1. **TEST PRACTICE** Find the GCF of 24, 48, and 84.
   A 24
   B 12
   C 8
   D 6







The GCF of 24, 48, and 84 is $2 \times 2 \times 3$ or 12.
The correct answer is B.

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

2. $\frac{12}{18} = \frac{\blacksquare}{6}$

$$\frac{12}{18} = \frac{\blacksquare}{6}$$

Since 18 ÷ 3 = 6, divide the numerator and the denominator by 3.

$$\frac{12}{18} \overset{\div 3}{=} \frac{\blacksquare}{6} \quad \div 3$$

, so $\frac{12}{18} = \frac{4}{6}$.

Name:

3. $\frac{7}{9} = \frac{35}{\blacksquare}$

$\frac{7}{9} = \frac{35}{\blacksquare}$

Since $7 \times 5 = 35$, multiply the numerator and the denominator by 5.

$\overset{\times 5}{\frown}$

$\frac{7}{9} = \frac{35}{\blacksquare}$

$\underset{\times 5}{\smile}$

so $\frac{7}{9} = \frac{35}{45}$.

4. **DVDs** Danny has 8 action DVDs, 4 comedy DVDs, and 2 drama DVDs. Write a fraction in simplest form that compares the number of comedy DVDs to the total number of DVDs.

There are 8 + 4 + 2 or 14 DVDs total.

$$\frac{\text{comedy DVDs}}{\text{total DVDs}} = \frac{4}{14}$$

$$= \frac{2}{7}$$

Divide by the GCF, 2.

So, $\frac{2}{5}$ of the collection are red marbles.

5. $2\frac{5}{7}$

$$2\frac{5}{7} = \frac{(2 \times 7) + 5}{7} = \frac{19}{7}$$

6. $4\frac{2}{3}$

$$4\frac{2}{3} = \frac{(4 \times 3) + 2}{3} = \frac{14}{3}$$

7. $1\frac{4}{7}$

$$1\frac{4}{7} = \frac{(1 \times 7) + 4}{7} = \frac{11}{7}$$

Name:

8. **PHYSICS** The speed of sound is about $\frac{3{,}806}{5}$ miles per hour. Write this speed as a mixed number.

Divide 3,806 by 5.

$$\begin{array}{r} 761\frac{1}{5} \\ 5\overline{)3806} \\ -35 \\ \hline 30 \\ -30 \\ \hline 06 \\ -5 \\ \hline 1 \end{array}$$

So, the speed of sound is about $761\frac{1}{5}$ miles per hour.

9. **MOVIES** In how many different ways can four friends sit next to each other in one row of a movie theater?

Explore: We know there are four friends at the movie theater. We need to know the number of possible arrangements for these friends to sit next to each other in one row.
Plan: Make a list of all the different possible arrangements. Use the numbers 1, 2, 3, and 4 to represent the four friends.
Solve:

1234	2134	3124	4123
1243	2143	3142	4132
1324	2314	3214	4213
1342	2341	3241	4231
1423	2413	3412	4312
1432	2431	3421	4321

There are 24 different ways the four friends can sit next to each other in one row at a movie theater.
Check: Check the answer by seeing if each number is accounted for six times in the first, second, third, and fourth positions.

10. **MULTIPLE CHOICE** At the gym, Hilary swims every 6 days, runs every 4 days, and cycles every 16 days. If she did all three activities today, in how many days will she do all three activities again on the same day?
F 24 days
G 26 days
H 48 days
J 64 days

Write the prime factorization of 6, 4, and 16.

$6 = ② \times ③$

$4 = ② \times ②$

$16 = ② \times 2 \times 2 \times 2$

The LCM is $2 \times 2 \times 2 \times 2 \times 3$ or 48.
So, Hilary will do these three activities again on the same day in 48 days.
The correct answer is H.

11. 6, 15

multiples of 6: 6, 12, 18, 24, 30, …
multiples of 15: 15, 30, …
The LCM of 6 and 15 is 30.

Name:

12. 4, 9, 18

multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32, 36, …
multiples of 9: 9, 18, 27, 36, …
multiples of 18: 18, 36, …

13. $\frac{4}{7} \bullet \frac{3}{5}$

The LCD is 35.

$$\frac{4}{7} \overset{\times 5}{=} \frac{20}{35}$$

$$\frac{3}{5} \overset{\times 7}{=} \frac{21}{35}$$

Since $20 < 21$, $\frac{20}{35} < \frac{21}{35}$ so $\frac{4}{7} < \frac{3}{5}$.

14. $6\frac{1}{4} \bullet 6\frac{4}{18}$

Since the whole numbers are the same, compare the fractions.
The LCD is 36.

$$\frac{1}{4} \overset{\times 9}{=} \frac{9}{36}$$

$$\frac{4}{18} \overset{\times 2}{=} \frac{8}{36}$$

Since $9 > 8$, $\frac{9}{36} > \frac{8}{36}$ so $6\frac{1}{4} > 6\frac{4}{18}$.

15. $\frac{2}{9} \bullet \frac{6}{27}$

The LCD is 27.

$$\frac{2}{9} \overset{\times 3}{=} \frac{6}{27}$$

Since $6 = 6$, $\frac{6}{27} = \frac{6}{27}$ so $\frac{2}{9} = \frac{6}{27}$.

Name:

16. Order the fractions $1\frac{5}{6}$, $1\frac{3}{4}$, $1\frac{2}{3}$, and $1\frac{7}{9}$ from least to greatest.

Since the whole numbers are the same, compare the fractions $\frac{5}{6}$, $\frac{3}{4}$, $\frac{2}{3}$, and $\frac{7}{9}$.

The LCD is 36.

$$\frac{5}{6} \overset{\times 6}{=} \frac{30}{36}$$

$$\frac{3}{4} \overset{\times 9}{=} \frac{27}{36}$$

$$\frac{2}{3} \overset{\times 12}{=} \frac{24}{36}$$

$$\frac{7}{9} \overset{\times 4}{=} \frac{28}{36}$$

Since $24 < 27 < 28 < 30$, $\frac{2}{3} < \frac{3}{4} < \frac{7}{9} < \frac{5}{6}$. So, the order from least to greatest is $1\frac{2}{3}$, $1\frac{3}{4}$, $1\frac{7}{9}$, and $1\frac{5}{6}$.

17. **MONEY** $\frac{19}{20}$ of all bills that are printed by U.S. Treasury Department are used to replace worn-out money. Write this fraction as a decimal.

Since 20 is a factor of 100, write an equivalent fraction with a denominator of 100.

$$\frac{19}{20} \overset{\times 5}{=} \frac{95}{100}$$

$$= 0.95$$

18. 0.84

Divide by the GCF, 4.

$$0.84 = \frac{84}{100}$$

$$= \frac{21}{25}$$

Name:

19. 7.015

Divide by the GCF, 5.

$$7.015 = 7\frac{15}{1000}$$

$$= 7\frac{3}{200}$$

20. 1.3

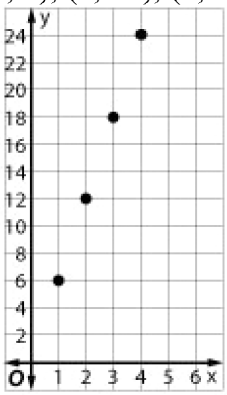
$$1.3 = 1\frac{3}{10}$$

21. **SAVINGS** The table shows the amount of money Andrew saved in November.

Week	Total Saved ($)
1	6
2	12
3	18
4	24

List this information as ordered pairs. Then graph the ordered pairs on a coordinate plane.

(1, 6), (2, 12), (3, 18), (4, 24)



22. *A*

Start at the origin. Move right to find the *x*-coordinate and up to find the *y*-coordinate. Point *A* is named by (1.5, 2).

23. *B*

Start at the origin. Move right to find the *x*-coordinate and up to find the *y*-coordinate. Point *B* is named by (2, 4).

24. *C*

Start at the origin. Move right to find the *x*-coordinate and up to find the *y*-coordinate. Point *C* is named by (3, 4.5).

25. *D*

Start at the origin. Move right to find the *x*-coordinate and up to find the *y*-coordinate. Point *D* is named by (6, 3.5).