Chapter 5 - Operations with Fractions - Practice Test

Round each number to the nearest half.

1. $4\frac{7}{8}$

   The numerator of $\frac{7}{8}$ is nearly as large as the

   denominator. So, $4\frac{7}{8}$ rounds to 5.

2. $1\frac{10}{18}$

   The numerator of $\frac{10}{18}$ is about half the

   denominator. So, $1\frac{10}{18}$ rounds to $1\frac{1}{2}$.

3. $11\frac{1}{17}$

   The numerator of $\frac{1}{17}$ is much smaller than the

   denominator. So, $11\frac{1}{17}$ rounds to 11.

4. **TRACK** For a 3-person relay race, a coach can choose from 4 of his top runners. How many different 3-person teams can he choose? Use the act it out strategy.

   He can choose 24 3-person teams.

Name:

5. **MULTIPLE CHOICE** The table shows the amount of rainfall over a one-week period in May. It did not rain on any other days of the week. Find the total amount of rainfall for the week.

Day of Week	Rainfall (in.)
Monday	$1\dfrac{1}{4}$
Thursday	$\dfrac{5}{8}$
Saturday	$1\dfrac{5}{16}$

A $2\dfrac{3}{16}$ in.

B $2\dfrac{5}{16}$ in.

C $3\dfrac{3}{16}$ in.

D $3\dfrac{5}{16}$ in.

C;

$$1\dfrac{1}{4}+\dfrac{5}{8}+1\dfrac{5}{16}=\dfrac{5}{4}+\dfrac{5}{8}+\dfrac{21}{16}$$

$$=\dfrac{20}{16}+\dfrac{10}{16}+\dfrac{21}{16}$$

$$=\dfrac{51}{16}$$

$$=3\dfrac{3}{16}$$

Add or subtract. Write in simplest form.

6. $\dfrac{2}{9}+\dfrac{5}{9}$

$$\dfrac{2}{9}+\dfrac{5}{9}=\dfrac{2+5}{9}$$

$$=\dfrac{7}{9}$$

7. $\dfrac{11}{12} - \dfrac{3}{8}$

The LCD is 24.

$$\dfrac{11}{12} - \dfrac{3}{8} = \dfrac{22}{24} - \dfrac{9}{24}$$

$$= \dfrac{22 - 9}{24}$$

$$= \dfrac{13}{24}$$

8. $\dfrac{2}{5} + \dfrac{2}{4}$

The LCD is 20.

$$\dfrac{2}{5} + \dfrac{2}{4} = \dfrac{8}{20} + \dfrac{10}{20}$$

$$= \dfrac{8 + 10}{20}$$

$$= \dfrac{18}{20} \text{ or } \dfrac{9}{10}$$

9. **CAKES** At a party, if $\dfrac{1}{3}$ of one sheet cake and $\dfrac{1}{6}$ of another sheet cake remain uneaten, what fraction of a whole sheet cake remains uneaten?

$$\dfrac{1}{3} + \dfrac{1}{6} = \dfrac{2}{6} + \dfrac{1}{6}$$

$$= \dfrac{2 + 1}{6}$$

$$= \dfrac{3}{6} \text{ or } \dfrac{1}{2}$$

Half of a whole sheet cake remains uneaten.

10. $2\dfrac{1}{5} + 4\dfrac{2}{5}$

$$2\dfrac{1}{5}$$
$$+ 4\dfrac{2}{5}$$
$$\overline{6\dfrac{3}{5}}$$

11. $6\frac{5}{8} - 4\frac{1}{2}$

$$6\frac{5}{8} \qquad 6\frac{5}{8}$$

$$\rightarrow$$

$$-4\frac{1}{2} \qquad -4\frac{4}{8}$$

$$\overline{\qquad} \qquad \overline{\qquad}$$

$$2\frac{1}{8}$$

12. $11\frac{1}{2} - 7\frac{3}{5}$

$$11\frac{1}{2} \qquad 11\frac{5}{10} \qquad 10\frac{15}{10}$$

$$\rightarrow \qquad\qquad \rightarrow$$

$$-7\frac{3}{5} \qquad -7\frac{6}{10} \qquad -7\frac{6}{10}$$

$$\overline{\qquad} \qquad \overline{\qquad} \qquad \overline{\qquad}$$

$$3\frac{9}{10}$$

13. **MULTIPLE CHOICE** If you use $1\frac{1}{4}$ pounds of a 3-pound package of ground beef and freeze the rest, how much ground beef do you freeze?

F $2\frac{3}{4}$ lb

G $1\frac{3}{4}$ lb

H $1\frac{1}{4}$ lb

J $\frac{3}{4}$ lb

$$3 \qquad\qquad 2\frac{4}{4}$$

$$\rightarrow$$

$$-1\frac{1}{4} \qquad -1\frac{1}{4}$$

$$\overline{\qquad} \qquad \overline{\qquad}$$

$$1\frac{3}{4}$$

You freeze $1\frac{3}{4}$ pounds of ground beef.

14. $\frac{1}{3} \times 22$

$$\frac{1}{3} \times 22 \rightarrow \frac{1}{3} \times 21 = 7$$

15. $3\frac{2}{3} \times 5\frac{1}{9}$

$3\frac{2}{3} \times 5\frac{1}{9} \quad \rightarrow \quad 4 \times 5 = 20$

16. $\frac{7}{8} \times 39$

Estimate $\frac{1}{8} \times 39$ first.

$\frac{1}{8} \times 39 \;\rightarrow\; \frac{1}{8} \times 40$

$\frac{1}{8} \times 40 = 5$

If $\frac{1}{8} \times 40 = 5$, then $\frac{7}{8} \times 40 = 7 \times 5 = 35$.

So, $\frac{7}{8} \times 39$ is about 35.

17. $6\frac{4}{5} \times 8\frac{1}{7}$

$6\frac{4}{5} \times 8\frac{1}{7} \quad \rightarrow \quad 7 \times 8 = 56$

18. $\frac{3}{5} \times \frac{2}{9}$

$\frac{3}{5} \times \frac{2}{9} = \frac{\overset{1}{\cancel{3}} \times 2}{5 \times \underset{3}{\cancel{9}}}$

$= \frac{2}{15}$

19. $\frac{3}{8} \times 2\frac{2}{3}$

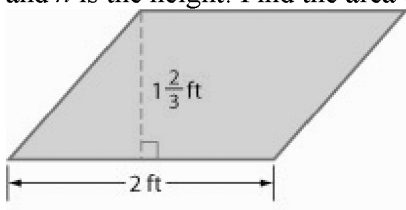$\frac{3}{8} \times 2\frac{2}{3} = \frac{3}{8} \times \frac{8}{3}$

$= \frac{\overset{1}{\cancel{3}} \times \overset{1}{\cancel{8}}}{\underset{1}{\cancel{8}} \times \underset{1}{\cancel{3}}}$

$= 1$

20. $7\dfrac{7}{8} \times 5\dfrac{1}{3}$

$$7\dfrac{7}{8} \times 5\dfrac{1}{3} = \dfrac{63}{8} \times \dfrac{16}{3}$$

$$= \dfrac{\overset{21}{\cancel{63}} \times \overset{2}{\cancel{16}}}{\underset{1}{\cancel{8}} \times \underset{1}{\cancel{3}}}$$

$$= 42$$

21. **GEOMETRY** To find the area of a parallelogram, use the formula $A = bh$, where b is the length of the base and h is the height. Find the area of the parallelogram.

$A = bh$

$$= 2 \times 1\dfrac{2}{3}$$

$$= \dfrac{2}{1} \times \dfrac{5}{3}$$

$$= \dfrac{2 \times 5}{1 \times 3}$$

$$= \dfrac{10}{3}$$

$$= 3\dfrac{1}{3}$$

The area of the parallelogram is $3\dfrac{1}{3}$ ft^2.

22. $\dfrac{1}{8} \div \dfrac{3}{4}$

$$\dfrac{1}{8} \div \dfrac{3}{4} = \dfrac{1}{8} \times \dfrac{4}{3}$$

$$= \dfrac{1 \times \overset{1}{\cancel{4}}}{\underset{2}{\cancel{8}} \times 3}$$

$$= \dfrac{1}{6}$$

23. $\dfrac{2}{5} \div 4$

$$\dfrac{2}{5} \div 4 = \dfrac{2}{5} \times \dfrac{1}{4}$$

$$= \dfrac{\overset{1}{\cancel{2}} \times 1}{5 \times \underset{2}{\cancel{4}}}$$

$$= \dfrac{1}{10}$$

24. $5\dfrac{3}{4} \div 1\dfrac{1}{2}$

$$5\dfrac{3}{4} \div 1\dfrac{1}{2} = \dfrac{23}{4} \div \dfrac{3}{2}$$

$$= \dfrac{23}{4} \times \dfrac{2}{3}$$

$$= \dfrac{23 \times \overset{1}{\cancel{2}}}{\underset{2}{\cancel{4}} \times 3}$$

$$= \dfrac{23}{6} \text{ or } 3\dfrac{5}{6}$$

25. **ALGEBRA** Evaluate $x \div y$ if $x = 7\dfrac{2}{3}$ and $y = 1\dfrac{4}{5}$. Write in simplest form.

$$x \div y = 7\dfrac{2}{3} \div 1\dfrac{4}{5}$$

$$= \dfrac{23}{3} \div \dfrac{9}{5}$$

$$= \dfrac{23}{3} \times \dfrac{5}{9}$$

$$= \dfrac{23 \times 5}{3 \times 9}$$

$$= \dfrac{115}{27}$$

$$= 4\dfrac{7}{27}$$