Multiplication Fact Challenge How fast can you say all 72 products?

	A	В	C	D	10	r	G	III.	
1.	6 × 3	$\frac{4}{\times 4}$	$\frac{8}{\times 2}$	9 × 6	$\frac{0}{\times 7}$	$\frac{3}{\times 2}$	$\frac{1}{\times 5}$	9 × 8	$\frac{7}{\times 6}$
2.	9 ×3	2 × 8	$\frac{8}{\times 6}$	$\frac{5}{\times 0}$	8 ×8	$\frac{7}{\times 8}$	5 × 9	$\frac{4}{\times 9}$	$\frac{6}{\times 1}$
3.	$\frac{2}{\times 2}$	8 × 4	6 × 9	5 × 5	$\frac{8}{\times 9}$	9 × 7	0 × 6	$\frac{9}{\times 4}$	$\frac{8}{\times 3}$
4.	$\frac{9}{\times 2}$	$\begin{array}{c} 6 \\ \times 2 \end{array}$	$\frac{4}{\times 7}$	<u>9</u> ×9	8 × 7	$\frac{9}{\times 5}$	5 × 7	$\frac{3}{\times 8}$	$\frac{1}{\times 1}$
5.	6 × 5	$\frac{4}{\times 3}$	$\frac{5}{\times 2}$	$\frac{7}{\times 9}$	6 × 7	4 × 8	$\frac{7}{\times 3}$	0 × 0	5 × 3
6.	$\frac{5}{\times 4}$	$0\\ \times 1$	$\frac{2}{\times 3}$	6 × 8	$\frac{7}{\times 5}$	$\frac{6}{\times 4}$	$\frac{3}{\times 7}$	<u>×8</u>	$\frac{4}{\times 5}$
7.	$\frac{3}{\times 9}$	$\frac{7}{\times 2}$	$\frac{0}{\times 9}$	$\frac{4}{\times 2}$	$\frac{7}{\times 7}$	8 × 5	$\frac{7}{\times 4}$	$\frac{3}{\times 3}$	$\frac{2}{\times 4}$
8.	6	5	1	1	3	5	3	2	0

Multiplication with Carrying

1.
$$58$$
 2. 75 3. 16 4. 37 5. 84 6. 53 7. 64 $\times 3$ $\times 3$ $\times 4$ $\times 8$ $\times 8$

8.
$$437$$
 9. 209 **10.** 358 **11.** 592 **12.** 746 **13.** 928 $\times 8$ $\times 9$

20.
$$83 \times 76$$

30.
$$974 \times 632$$

34.
$$93 \times 6 =$$

35.
$$127 \times 9 =$$

34.
$$93 \times 6 =$$
 _____ **35.** $127 \times 9 =$ ____ **36.** $$2.53 \times 5 =$ ____

37.
$$57 \times 3 =$$

38.
$$572 \times 8 =$$

37.
$$57 \times 3 =$$
 _____ **38.** $572 \times 8 =$ ____ **39.** $639 \times 4 =$ _____

Division Tables (No two-digit facts or divisors or quotients of 1 are included.)

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я.	LQ.	M	v	

$$2 \boxed{8}$$
 $2 \boxed{4}$

$$2\overline{6}$$

$$2\overline{12}$$

$$2\overline{\smash{\big|}\, 10}$$

$$2\overline{14}$$

$$2\overline{16}$$

Table 3

$$3\overline{21}$$

$$\overline{324}$$

Table 4

$$4\overline{12}$$

$$4\overline{24}$$

$$4 \overline{32}$$

Table 5

$$5\overline{40}$$

Table 6

$$6\overline{12}$$
 6

$$6\overline{24}$$

$$6\overline{48}$$

$$6\overline{42}$$

Table 7

$$7\overline{21}$$

$$7\overline{42}$$

Table 8

Table 9

$$9 \overline{\smash{\big|}\, 36}$$
 $9 \overline{\smash{\big|}\, 54}$ $9 \overline{\smash{\big|}\, 45}$

Division Fact Challenge How fast can you say all 56 quotients?

	A	В	C	D	ID	R	G
1.	8 6 4	4 2 8	5 15	9 18	5 4 5	2 18	5 2 0
2.	7 6 3	8 3 2	2 1 4	6 2 4	7 4 2	9 2 7	8 4 0
	W.		v			×	
3.	6 4 8	3 2 1	4 1 6	6 18	8 56	7 2 8	2 6
4.	3 18	9 8 1	9 4 5	8 2 4	5 2 5	5 3 5	$3\overline{\smash{\big }24}$
						2 -	
5.	7 1 4	2 16	6 3 0	4 8	7 4 9	5 3 0	7 3 5
		3					
6.	2 8	8 48	7 2 1	5 1 0	6 4 2	6 1 2	8 7 2
7.	$4 \overline{12}$	6 3 6	7 5 6	8 16	9 3 6	3 12	4 3 2
8.	9 6 3	$6\overline{54}$	$4\overline{\smash{\big }20}$	3 6	9 7 2	5 4 0	$9 \overline{54}$

Division with a One-digit Divisor

Watch for remainders.

Write the remainders as fractions.

Write the remainders as fractions in lowest terms.

Division with a Two-digit Divisor

1.
$$20 \ 180$$
 2. $50 \ 400$ **3.** $90 \ 360$ **4.** $60 \ 240$

Watch for remainders. Check each quotient.

Write the remainders as fractions in lowest terms. Check each quotient.

Writing Large Numbers

Write these numbers.

- 1. 23 million, 7 thousand, 26
- 2. 5 million, 231 thousand, 8
- 3. 216 million, 87 thousand
- 4. 3 million, 4 thousand, 2
- **5.** 6 billion, 3 million, 8
- **6.** 21 billion, 18 million, 25
- **7.** 87 billion, 932

Write the value of the circled digit.

Write in order from least to greatest.

greatest

Circle the numbers whose commas are in the wrong places.

Circle the digit in the ten millions' place.

Write one thousand more than the number.

Write ten thousand less than the number.

Converting Measures

- 1. 5 feet ____ inches
- ____ inches ___ pints
- **2.** 2 yards **3.** 16 cups **4.** 23 gallons ____ quarts

- ____ ounces ____ weeks ____ centimeters ____ pecks
- **5.** 5 pounds **6.** 56 days **7.** 3 meters **8.** 32 quarts

- **9.** 21 ft. = ____ yd. **10.** 12 yd. = ____ ft. **11.** 80 oz. = ____ lb.

- **12.** $27 \text{ ft.} + 6 \text{ yd.} = \underline{\hspace{1cm}} \text{yd.}$
- **13.** $3 \text{ lb.} 7 \text{ oz.} = \underline{\hspace{1cm}} \text{ oz.}$

Averaging

1. Grades

89

2. Lengths

15 in. 7 in. 10 in. 8 in. 11 in. 13 in.

13 in.

3. Temperatures

55° 47° 53° 59° 46°

4. Prices

\$ 8.50 9.75 6.36 8.55

5. Miles

6. Weights

7. Ages

8. Books

73,206 58,729 46,832 75,900 69,457 38,924

9. Gallons

Fraction Fun

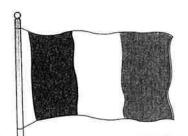
Mark under the fractions. Circle each denominator.

- 3. $\frac{2}{9}$ 4. $\frac{1}{5}$ 5. 231



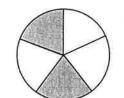
Answer the questions about France's flag.

- **9.** How many parts? _____
- **10.** Are all the parts equal? _____
- 11. How many parts are red?
- **12.** What fraction of the flag is red? _____

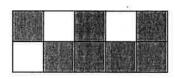


What fractional part is colored?

13.



14.



15.



Estimate how full each container is.

16.



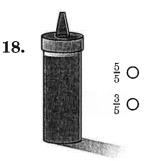
 $\frac{1}{2}$ O



17.

 $\frac{7}{10}$ O

 $\frac{1}{10}$ O



Read and write each fraction.

- **19.** three fourths
- **20.** nine tenths
- **21.** four sevenths **22.** one fifth

Find the fractional part of each whole number by dividing the whole number by the denominator of the unit fraction.

23.
$$\frac{1}{5}$$
 of $35 =$

24.
$$\frac{1}{9}$$
 of $81 =$

25.
$$\frac{1}{2}$$
 of $16 =$

23.
$$\frac{1}{5}$$
 of 35 = ____ **24.** $\frac{1}{9}$ of 81 = ___ **25.** $\frac{1}{2}$ of 16 = ___ **26.** $\frac{1}{7}$ of 14 = ____

27.
$$\frac{1}{8}$$
 of $56 =$ _____

28.
$$\frac{1}{5}$$
 of $15 =$

29.
$$\frac{1}{7}$$
 of 63 =

27.
$$\frac{1}{8}$$
 of $56 =$ _____ **28.** $\frac{1}{5}$ of $15 =$ ____ **29.** $\frac{1}{7}$ of $63 =$ ____ **30.** $\frac{1}{9}$ of $27 =$ ____

Reducing Fractions

Reduce by dividing the numerator and denominator by 2.

1.
$$\frac{2}{4} =$$

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

3.
$$\frac{6}{8} =$$

1.
$$\frac{2}{4} =$$
 2. $\frac{4}{6} =$ 3. $\frac{6}{8} =$ 4. $\frac{2}{10} =$ 5. $\frac{12}{14} =$

5.
$$\frac{12}{14} =$$

Reduce by dividing the numerator and denominator by 3.

6.
$$\frac{21}{24} =$$

7.
$$\frac{15}{18} =$$

8.
$$\frac{51}{63}$$
 =

9.
$$\frac{3}{6} =$$

6.
$$\frac{21}{24} =$$
 7. $\frac{15}{18} =$ **8.** $\frac{51}{63} =$ **9.** $\frac{3}{6} =$ **10.** $\frac{9}{12} =$

Reduce by dividing the numerator and denominator by 4.

11.
$$\frac{36}{40} =$$

12.
$$\frac{4}{8} =$$

13.
$$\frac{20}{24} =$$

14.
$$\frac{12}{20} =$$

11.
$$\frac{36}{40} =$$
 ____ 12. $\frac{4}{8} =$ ____ 13. $\frac{20}{24} =$ 14. $\frac{12}{20} =$ 15. $\frac{84}{100} =$

Reduce by dividing the numerator and denominator by 5.

16.
$$\frac{5}{10} =$$

17.
$$\frac{45}{50} =$$

18.
$$\frac{30}{55} =$$

19.
$$\frac{10}{45} =$$

16.
$$\frac{5}{10} =$$
 ____ **17.** $\frac{45}{50} =$ ____ **18.** $\frac{30}{55} =$ ____ **19.** $\frac{10}{45} =$ ____ **20.** $\frac{75}{85} =$

Reduce by dividing the numerator and denominator by 6.

21.
$$\frac{42}{54} =$$

22.
$$\frac{6}{12} =$$

23.
$$\frac{18}{30} =$$

24.
$$\frac{24}{30} =$$

21.
$$\frac{42}{54} =$$
 ____ **22.** $\frac{6}{12} =$ ____ **23.** $\frac{18}{30} =$ ____ **24.** $\frac{24}{30} =$ ____ **25.** $\frac{120}{126} =$

Reduce these fractions to lowest terms after determining the greatest common factor.

26.
$$\frac{5}{15} =$$

27.
$$\frac{3}{9} =$$

28.
$$\frac{2}{18} =$$

29.
$$\frac{6}{24} =$$

26.
$$\frac{5}{15} =$$
 ____ **27.** $\frac{3}{9} =$ ____ **28.** $\frac{2}{18} =$ ____ **29.** $\frac{6}{24} =$ ____ **30.** $\frac{5}{100} =$ ____

31.
$$\frac{3}{18} =$$

32.
$$\frac{6}{24} =$$

33.
$$\frac{2}{20} =$$

31.
$$\frac{3}{18} =$$
 ____ **32.** $\frac{6}{24} =$ ____ **33.** $\frac{2}{20} =$ ____ **34.** $\frac{10}{30} =$ ____ **35.** $\frac{45}{55} =$ ____

35.
$$\frac{45}{55} =$$

36.
$$\frac{120}{138} =$$

37.
$$\frac{30}{50} =$$

38.
$$\frac{10}{15} =$$

36.
$$\frac{120}{138} =$$
 37. $\frac{30}{50} =$ **38.** $\frac{10}{15} =$ **39.** $\frac{8}{12} =$ **40.** $\frac{15}{20} =$

40.
$$\frac{15}{20} =$$

41.
$$\frac{18}{27} =$$

42.
$$\frac{117}{153} =$$

43.
$$\frac{9}{12} =$$

41.
$$\frac{18}{27} =$$
 ____ **42.** $\frac{117}{153} =$ ____ **43.** $\frac{9}{12} =$ ____ **44.** $\frac{15}{21} =$ ____ **45.** $\frac{12}{16} =$ ____

45.
$$\frac{12}{16} =$$

Proper and Improper Fractions

Mark under the improper fractions. Circle the denominator of each fraction.

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

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

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

1.
$$\frac{3}{8}$$
 2. $\frac{8}{3}$ 3. $\frac{9}{9}$ 4. $\frac{4}{3}$ 5. $\frac{6}{7}$ 6. $\frac{11}{15}$ 7. $\frac{10}{7}$ 8. $\frac{5}{5}$

8.
$$\frac{5}{5}$$

Change the improper fractions to whole numbers.

9.
$$\frac{15}{5} =$$
 _____ **10.** $\frac{81}{9} =$ _____ **11.** $\frac{17}{17} =$ _____ **12.** $\frac{50}{2} =$ _____ **13.** $\frac{12}{4} =$ _____ **14.** $\frac{56}{7} =$ _____

10.
$$\frac{81}{9} =$$

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

12.
$$\frac{50}{2} =$$

13.
$$\frac{12}{4}$$

14.
$$\frac{56}{7} =$$

Change the improper fractions to mixed numbers.

15.
$$\frac{13}{4} =$$
 16. $\frac{75}{8} =$ **17.** $\frac{82}{9} =$ **18.** $\frac{52}{7} =$ **19.** $\frac{43}{6} =$ **20.** $\frac{19}{4} =$

16.
$$\frac{75}{8}$$
 =

17.
$$\frac{82}{9} =$$

18.
$$\frac{52}{7}$$
 =

19.
$$\frac{43}{6} =$$

20.
$$\frac{19}{4}$$
 =

Change the improper fractions to mixed numbers. Reduce the fractions to lowest terms.

21.
$$\frac{48}{9} =$$
 _____ **22.** $\frac{22}{4} =$ _____ **23.** $\frac{15}{10} =$ _____ **24.** $\frac{50}{8} =$ _____ **25.** $\frac{32}{6} =$ _____

22.
$$\frac{22}{4}$$
 =

23.
$$\frac{15}{10} =$$

24.
$$\frac{50}{8} =$$

25.
$$\frac{32}{6}$$
 =

Equivalent Fractions

Make equivalent fractions by multiplying each term by 2.

1.
$$\frac{3}{4} =$$
 2. $\frac{7}{8} =$ 3. $\frac{10}{11} =$ 4. $\frac{5}{7} =$ 5. $\frac{1}{3} =$ 6. $\frac{3}{11} =$

$$2 \cdot \frac{7}{8} =$$

$$3. \frac{10}{11} =$$

4.
$$\frac{5}{7} =$$

5.
$$\frac{1}{3} =$$

6.
$$\frac{3}{11} =$$

Make equivalent fractions by multiplying each term by 6.

$$7. \frac{2}{3} =$$

8.
$$\frac{5}{6} =$$

9.
$$\frac{1}{8}$$
 =

7.
$$\frac{2}{3} =$$
 8. $\frac{5}{6} =$ 9. $\frac{1}{8} =$ 10. $\frac{4}{5} =$ 11. $\frac{5}{7} =$ 12. $\frac{2}{9} =$ 1

11.
$$\frac{5}{7} =$$

12.
$$\frac{2}{9} =$$

Write the missing terms to make equivalent fractions.

13.
$$\frac{1}{2} = \frac{1}{4}$$

14.
$$\frac{2}{5} = \frac{15}{15}$$

15.
$$\frac{2}{3} = \frac{12}{12}$$

16.
$$\frac{5}{6} = \frac{1}{24}$$

17.
$$\frac{2}{3} = \frac{1}{6}$$

13.
$$\frac{1}{2} = \frac{1}{4}$$
 14. $\frac{2}{5} = \frac{1}{15}$ **15.** $\frac{2}{3} = \frac{1}{12}$ **16.** $\frac{5}{6} = \frac{1}{24}$ **17.** $\frac{2}{3} = \frac{1}{6}$ **18.** $\frac{7}{9} = \frac{6}{63}$

19.
$$\frac{3}{5} = \frac{3}{35}$$

20.
$$\frac{2}{7} = \frac{2}{49}$$

21.
$$\frac{1}{8} = \frac{1}{48}$$

19.
$$\frac{3}{5} = \frac{20}{35}$$
 20. $\frac{2}{7} = \frac{21}{49}$ **21.** $\frac{1}{8} = \frac{22}{48}$ **22.** $\frac{7}{10} = \frac{23}{70}$ **23.** $\frac{5}{11} = \frac{24}{121}$ **24.** $\frac{3}{8} = \frac{56}{56}$

23.
$$\frac{5}{11} = \frac{12}{12}$$

24.
$$\frac{3}{8} = \frac{3}{56}$$

25.
$$\frac{4}{9} = \frac{36}{36}$$

26.
$$\frac{7}{8} = \frac{7}{24}$$

27.
$$\frac{3}{4} = \frac{3}{48}$$

28.
$$\frac{3}{10} = \frac{3}{50}$$

25.
$$\frac{4}{9} = \frac{2}{36}$$
 26. $\frac{7}{8} = \frac{2}{24}$ **27.** $\frac{3}{4} = \frac{2}{48}$ **28.** $\frac{3}{10} = \frac{3}{50}$ **29.** $\frac{5}{6} = \frac{3}{42}$ **30.** $\frac{9}{13} = \frac{3}{26}$

30.
$$\frac{9}{13} = \frac{9}{26}$$

Adding Fractions

5.
$$\frac{5}{17} + \frac{7}{17} + \frac{3}{17} =$$

5.
$$\frac{5}{17} + \frac{7}{17} + \frac{3}{17} =$$
 6. $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{2}{8} =$ **7.** $\frac{9}{15} + \frac{2}{15} =$

7.
$$\frac{9}{15} + \frac{2}{15} =$$

8.
$$\frac{\frac{5}{18}}{\frac{1}{18}} + \frac{1}{\frac{1}{18}}$$

9.
$$\frac{\frac{7}{19}}{\frac{3}{19}} + \frac{4}{19}$$

8.
$$\frac{5}{18}$$
 9. $\frac{7}{19}$ 10. $7\frac{2}{11}$ 11. $121\frac{1}{5}$ 12. $73\frac{7}{16}$

$$\frac{1}{18}$$
 $\frac{3}{19}$ $6\frac{3}{11}$ $76\frac{2}{5}$ $29\frac{3}{16}$

$$\frac{1}{18}$$
 $\frac{1}{18}$ $\frac{1}{19}$ $\frac{1}$

11.
$$121\frac{1}{5}$$
 $76\frac{2}{5}$
 $+251\frac{1}{5}$

12.
$$73\frac{7}{16}$$
 $29\frac{3}{16}$
 $+ 6\frac{1}{16}$

Change the improper fractions and reduce if necessary.

13.
$$\frac{\frac{3}{4}}{\frac{1}{4}} + \frac{3}{4}$$

14.
$$\frac{\frac{1}{5}}{\frac{\frac{3}{5}}{5}}$$
 $+\frac{2}{5}$

15.
$$7\frac{3}{8}$$

17.
$$24\frac{5}{6}$$

 $93\frac{5}{6}$
 $+72$

Find common denominators before adding.

18.
$$\frac{\frac{3}{4}}{+\frac{1}{2}}$$

19.
$$4\frac{2}{5}$$
 $+ 7\frac{1}{3}$

20.
$$16\frac{1}{6}$$
 $+ 72\frac{1}{2}$

19.
$$4\frac{2}{5}$$
 20. $16\frac{1}{6}$ **21.** $42\frac{3}{4}$ $+72\frac{1}{2}$ $+93\frac{2}{3}$

22.
$$7\frac{1}{4}$$
 $11\frac{3}{8}$
 $+9\frac{1}{2}$

23.
$$23\frac{1}{4}$$
 $9\frac{5}{6}$
 $+92\frac{2}{3}$

24.
$$5\frac{5}{6}$$
 $9\frac{1}{2}$ $+ 2\frac{4}{9}$

25.
$$34\frac{1}{5}$$
 $17\frac{2}{3}$
 $+23\frac{3}{5}$

26.
$$3\frac{1}{2} + 7\frac{1}{5} =$$

26.
$$3\frac{1}{2} + 7\frac{1}{5} =$$
 27. $12\frac{3}{8} + 6\frac{1}{4} =$ **28.** $8\frac{1}{3} + 6\frac{1}{2} =$ **29.**

28.
$$8\frac{1}{3} + 6\frac{1}{2} =$$

Subtracting Fractions

5.
$$\frac{13}{19} - \frac{7}{19} =$$

6.
$$\frac{8}{11} - \frac{4}{11} =$$

7.
$$\frac{13}{21} - \frac{5}{21} =$$

5.
$$\frac{13}{19} - \frac{7}{19} =$$
 6. $\frac{8}{11} - \frac{4}{11} =$ **7.** $\frac{13}{21} - \frac{5}{21} =$ **8.** $\frac{9}{13} - \frac{7}{13} =$

9.
$$\frac{7}{9}$$
 $-\frac{5}{9}$

10.
$$\frac{24}{25}$$
 $-\frac{6}{25}$

11.
$$13\frac{30}{37}$$
 $-9\frac{16}{37}$

9.
$$\frac{7}{9}$$
 10. $\frac{24}{25}$ 11. $13\frac{30}{37}$ 12. $24\frac{9}{14}$ 13. $100\frac{13}{17}$ $-\frac{5}{9}$ $-\frac{6}{25}$ $-9\frac{16}{37}$ $-17\frac{8}{14}$ $-53\frac{5}{17}$

13.
$$100\frac{13}{17}$$

- $53\frac{5}{17}$

Reduce if necessary.

14.
$$\frac{9}{10}$$
 $-\frac{1}{10}$

15.
$$\frac{\frac{7}{12}}{-\frac{5}{12}}$$

16.
$$11\frac{14}{15}$$
 $-9\frac{4}{15}$

17.
$$201\frac{7}{8}$$
 $-93\frac{3}{8}$

Find common denominators before subtracting.

19.
$$23\frac{4}{5}$$
 $-16\frac{4}{15}$

20.
$$83\frac{1}{4}$$
 21. $2\frac{4}{7}$ **22.** $21\frac{3}{10}$ $-19\frac{1}{8}$ $-1\frac{1}{14}$ $-6\frac{1}{20}$

21.
$$2\frac{4}{7}$$
 $-1\frac{1}{14}$

22.
$$21\frac{3}{10}$$
 $-6\frac{1}{20}$

23.
$$16\frac{7}{10}$$
 $-9\frac{1}{5}$

24.
$$5 1\frac{2}{3}$$
 25. $4 1\frac{5}{6}$ **26.** $6 3\frac{1}{2}$ $-3 2\frac{3}{4}$ $-3 8\frac{2}{9}$

25.
$$4 \cdot 1\frac{5}{6}$$
 $- 3 \cdot 2\frac{3}{4}$

26.
$$6\ 3\frac{1}{2}$$
 $-\ 3\ 8\frac{2}{9}$

27.
$$381\frac{2}{3}$$
 $-264\frac{3}{5}$

28.
$$4\ 0\ 0\frac{2}{3}$$
 29. $2\ 4\frac{7}{9}$ **30.** $1\ 2\frac{7}{10}$ $-1\ 2\ 9\frac{1}{2}$ $-7\frac{1}{4}$ $-3\ \frac{3}{5}$

29.
$$24\frac{7}{9}$$
 $-7\frac{1}{4}$

30.
$$12\frac{7}{10}$$
 $-3\frac{3}{5}$

31.
$$8\frac{3}{4} - 6\frac{1}{2} =$$

31.
$$8\frac{3}{4} - 6\frac{1}{2} =$$
 ____ **32.** $15\frac{1}{3} - 9\frac{1}{5} =$ ____ **33.** $7\frac{4}{9} - 6\frac{1}{3} =$ ____

33.
$$7\frac{4}{9} - 6\frac{1}{3} =$$

Subtracting Fractions with Borrowing

1.
$$1$$
 $-\frac{1}{2}$

2. 1
$$-\frac{3}{4}$$

3.
$$1$$
 $-\frac{7}{8}$

4.
$$1$$
 $-\frac{1}{9}$

5.
$$2$$
 $-\frac{2}{3}$

6. 5
$$-\frac{5}{9}$$

7. 4
$$-\frac{1}{2}$$

8. 6
$$-\frac{3}{8}$$

9.
$$3$$
 $-1\frac{1}{4}$

10.
$$8$$
 $-3\frac{2}{5}$

11.
$$16$$
 $-6\frac{7}{8}$

12. 9
$$-5\frac{3}{7}$$

13.
$$6\frac{1}{4}$$
 $-2\frac{3}{4}$

14.
$$5\frac{3}{5}$$
 $-2\frac{4}{5}$

15.
$$7\frac{1}{5}$$
 $-6\frac{2}{5}$

14.
$$5\frac{3}{5}$$
 15. $7\frac{1}{5}$ 16. $24\frac{3}{8}$ $-2\frac{4}{5}$ $-6\frac{5}{5}$ $-9\frac{5}{8}$

Find common denominators before subtracting.

17.
$$2\frac{1}{3}$$
 $-1\frac{3}{5}$

18.
$$9\frac{1}{2}$$
 $-6\frac{3}{4}$

19.
$$17\frac{4}{9}$$
 $-13\frac{5}{6}$

20.
$$31\frac{2}{3}$$
 $-17\frac{3}{4}$

21.
$$100\frac{1}{4}$$
 $-76\frac{1}{2}$

22.
$$27\frac{3}{5}$$
 $-9\frac{9}{10}$

23.
$$2 \cdot 1 \cdot 3\frac{1}{3}$$
 $-8 \cdot 4\frac{3}{5}$

24.
$$10\frac{3}{8}$$
 $-3\frac{5}{6}$

25.
$$15\frac{3}{7}$$
 $-4\frac{11}{14}$

26.
$$7\frac{4}{9} - 6\frac{2}{3} =$$

27.
$$13\frac{3}{8} - 6\frac{3}{4} =$$
 28. $6\frac{1}{2} - 3\frac{3}{5} =$ **....**

28.
$$6\frac{1}{2} - 3\frac{3}{5} =$$

Multiplying Fractions

1.
$$\frac{1}{5} \times \frac{1}{4} =$$

2.
$$\frac{2}{3} \times \frac{4}{5} =$$

3.
$$\frac{3}{5} \times \frac{6}{7} =$$

1.
$$\frac{1}{5} \times \frac{1}{4} =$$
 2. $\frac{2}{3} \times \frac{4}{5} =$ 3. $\frac{3}{5} \times \frac{6}{7} =$ 4. $\frac{1}{7} \times \frac{3}{4} =$

Reduce products to lowest terms.

5.
$$\frac{2}{5} \times \frac{1}{4} =$$

6.
$$\frac{3}{5} \times \frac{5}{6} =$$

7.
$$\frac{1}{4} \times \frac{6}{7} =$$

5.
$$\frac{2}{5} \times \frac{1}{4} =$$
 ______ **6.** $\frac{3}{5} \times \frac{5}{6} =$ ______ **7.** $\frac{1}{4} \times \frac{6}{7} =$ ______ **8.** $\frac{3}{4} \times \frac{5}{6} =$ _____

Use cancellation if possible.

9.
$$\frac{3}{8} \times \frac{4}{5} =$$

10.
$$\frac{3}{7} \times \frac{14}{15} =$$

11.
$$\frac{2}{3} \times \frac{6}{7} =$$

9.
$$\frac{3}{8} \times \frac{4}{5} =$$
 10. $\frac{3}{7} \times \frac{14}{15} =$ **11.** $\frac{2}{3} \times \frac{6}{7} =$ **12.** $\frac{5}{6} \times \frac{4}{5} =$

13.
$$\frac{9}{10} \times \frac{5}{6} =$$
 14. $\frac{2}{5} \times \frac{6}{7} =$ **15.** $\frac{2}{7} \times \frac{7}{18} =$ **16.** $\frac{4}{9} \times \frac{3}{8} =$

14.
$$\frac{2}{5} \times \frac{6}{7} =$$

15.
$$\frac{2}{7} \times \frac{7}{18} =$$

16.
$$\frac{4}{9} \times \frac{3}{8} =$$

17.
$$9 \times \frac{3}{4} =$$

18.
$$\frac{5}{8} \times 16 =$$

17.
$$9 \times \frac{3}{4} =$$
 18. $\frac{5}{8} \times 16 =$ **19.** $\frac{2}{3} \times 12 =$ **20.** $15 \times \frac{1}{5} =$ **...**

20.
$$15 \times \frac{1}{5} =$$

21.
$$4\frac{7}{9} \times 54 =$$

22.
$$18 \times \frac{5}{6} =$$

21.
$$4\frac{7}{9} \times 54 =$$
 22. $18 \times \frac{5}{6} =$ **23.** $6\frac{1}{2} \times 10 =$ **24.** $9 \times 5\frac{3}{4} =$ **...**

24.
$$9 \times 5\frac{3}{4} =$$

25.
$$2\frac{3}{4} \times 1\frac{1}{2} =$$

26.
$$3\frac{2}{5} \times 10 =$$

25.
$$2\frac{3}{4} \times 1\frac{1}{2} =$$
 26. $3\frac{2}{5} \times 10 =$ **27.** $1\frac{1}{4} \times 1\frac{1}{6} =$ **28.** $\frac{4}{9} \times 81 =$ ____

28.
$$\frac{4}{9} \times 81 =$$

29.
$$\frac{2}{9} \times 3 =$$

30.
$$6\frac{2}{3} \times 30 =$$

29.
$$\frac{2}{9} \times 3 =$$
 ____ **30.** $6\frac{2}{3} \times 30 =$ ____ **31.** $5\frac{2}{9} \times 3 =$ ____ **32.** $1\frac{2}{3} \times 30 =$ ____

32.
$$1\frac{2}{3} \times 30 =$$

33.
$$\frac{9}{17} \times \frac{3}{4} =$$

34.
$$\frac{6}{7} \times \frac{2}{5} =$$

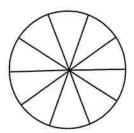
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33.
$$\frac{9}{17} \times \frac{3}{4} =$$
 34. $\frac{6}{7} \times \frac{2}{5} =$ **35.** $\frac{8}{9} \times \frac{3}{4} =$ **36.** $\frac{1}{2} \times \frac{1}{4} =$

36.
$$\frac{1}{2} \times \frac{1}{4} =$$

Decimal Fun

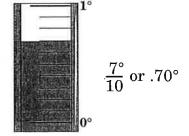
1. Shade seven-tenths of the circle.



- 2. What fraction names the shaded part of the circle in exercise 1?
- 3. What decimal names the shaded part?

Write each as a fraction and a decimal.

		fraction	decimal
4.	four tenths		
5.	nine tenths	8	- 18 - 1
6.	six tenths		



Circle the digit in the tenths' place in these mixed decimals. Read each number.

Give the fraction of a dollar for each.

Write each fraction in exercises 12-15 as decimals.

16.
$$\frac{5}{10} =$$

17.
$$\frac{3}{10} =$$

18.
$$\frac{7}{10} =$$

19.
$$\frac{1}{10} =$$

Read the mixed decimals and circle the digit in the hundredths' place.

Make both decimals hundredths and write >, <, or =.

Write the equivalent decimal for each fraction.

29.
$$\frac{9}{10} =$$

30.
$$\frac{91}{100} =$$

31.
$$\frac{9}{100} =$$

29.
$$\frac{9}{10} =$$
 30. $\frac{91}{100} =$ **31.** $\frac{9}{100} =$ **32.** $\frac{9}{1,000} =$

33.
$$\frac{31}{1,000} =$$

34.
$$\frac{3}{1,000} =$$

35.
$$\frac{17}{100} =$$

33.
$$\frac{31}{1,000} =$$
 ____ **34.** $\frac{3}{1,000} =$ ____ **35.** $\frac{17}{100} =$ ____ **36.** $\frac{251}{1,000} =$ ____

Adding Decimals

9.
$$135.7 + 423.9 =$$
 _____ **10.** $5.5 + 5.5 =$ ____ **11.** $4.32 + 4.3 =$ _

10.
$$5.5 + 5.5 =$$

11.
$$4.32 + 4.3 =$$

13.
$$106.7$$

 58.9
 327.8
 $+406.8$

Subtracting Decimals

6.
$$12.5 - 6.8 =$$

6.
$$12.5 - 6.8 =$$
 ______ **7.** $9.31 - 2.60 =$ _____ **8.** $12.10 - 8.42 =$ _____

9.
$$5.6 - 4.2 =$$

9.
$$5.6 - 4.2 =$$
 10. $13.3 - 7.9 =$ **11.** $4.321 - 1.488 =$ **_____**

13.
$$573.1$$
 -253.4

13.
$$573.1$$
 14. 6.000 **15.** 23.16 -253.4 -1.593 -17.83

13.
$$573.1$$
 14. 6.000 **15.** 23.16 **16.** 19.421 -253.4 -1.593 -17.83 -7.863

$$\begin{array}{r}
\mathbf{22.} & 7.621 \\
-3.825
\end{array}$$

23.
$$7.51$$
 24. 5.2 **25.** 19.1 **26.** 3.12 -6.237 -3.412 -12.72 -1.275

Perimeter Fun

Measure to find the perimeters.

1.



cm

2.



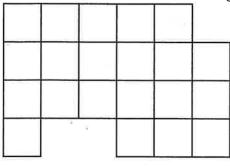
cm



__ cm

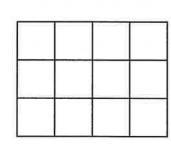
Count around the shapes to find the perimeters.

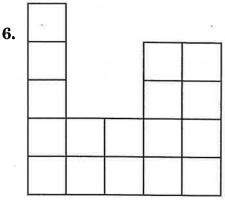
4.



cm

5.





cm

Use the formula $P = (2 \times l) + (2 \times w)$ to find the perimeters of rectangles with these dimensions.

7.
$$l = 4$$
 ft.; $w = 3$ ft.

8.
$$l = 18 \text{ cm}$$
; $w = 15 \text{ cm}$ **9.** $l = 4\frac{1}{2} \text{ ft.}$; $w = 3 \text{ ft.}$

cm

9.
$$l = 4\frac{1}{2}$$
 ft.; $w = 3$ ft.

Use the formula $P = 4 \times s$ to find the perimeters of squares with these dimensions.

10.
$$s = 9$$
 ft.

11.
$$s = 21 \text{ ft}$$

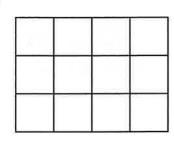
11.
$$s = 21$$
 ft. **12.** $s = 2\frac{1}{2}$ ft. **13.** $s = 301$ cm

13.
$$s = 301 \text{ cm}$$

Area Fun

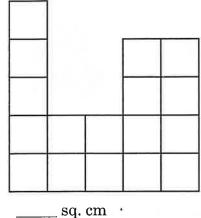
Find the areas. Each \square equals one square centimeter.

1.

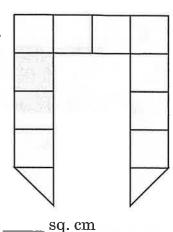


sq. cm

2.



3.



Use the formula $A = l \times w$ to find the areas of rectangles with these dimensions.

4.
$$l = 9$$
 ft.; $w = 7$ ft.

5.
$$l = 24$$
 ft.; $w = 9$ ft.

4.
$$l = 9$$
 ft.; $w = 7$ ft. **5.** $l = 24$ ft.; $w = 9$ ft. **6.** $l = 52$ in.; $w = 48$ in.

7.
$$l = 17 \text{ yd.}; w = 16 \text{ yd.}$$

7.
$$l = 17$$
 yd.; $w = 16$ yd. **8.** $l = 104$ in.; $w = 57$ in. **9.** $l = 6\frac{1}{2}$ ft.; $w = 4$ ft.

9.
$$l = 6\frac{1}{2}$$
 ft.; $w = 4$ ft.

10.
$$l = \frac{3}{4}$$
 in.; $w = \frac{1}{2}$ in.

10.
$$l = \frac{3}{4}$$
 in.; $w = \frac{1}{2}$ in. **11.** $l = 10$ ft.; $w = 7\frac{1}{2}$ ft. **12.** $l = 4\frac{1}{2}$ ft.; $w = 1\frac{1}{2}$ ft.

12.
$$l = 4\frac{1}{2}$$
 ft.; $w = 1\frac{1}{2}$ ft.

Use the formula $A = s \times s$ to find the areas of squares with these dimensions.

13.
$$s = 5$$
 in.

14.
$$s = 29$$
 ft.

15.
$$s = 1\frac{1}{4}$$
 yd.

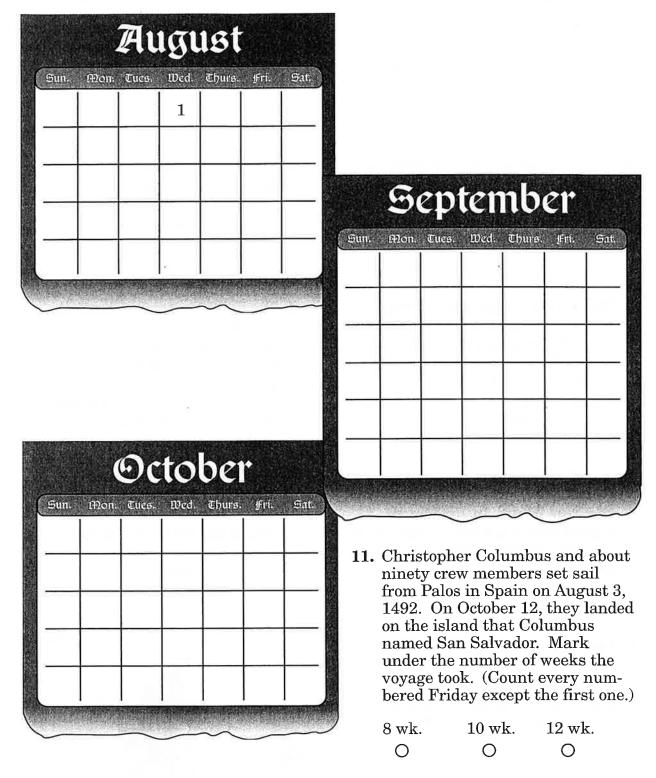
Story Problem Fun

- 1. Mark paid \$7.83 for a book entitled *John Cabot—The Discoverer of North America*. Was the cost of the book closer to \$7 or \$8?
- **2.** A beekeeper collected nine gallons of honey. How many quarts did he collect? _____ quarts
- 3. Suppose twelve Pilgrim children gathered pumpkins one afternoon. Each child gathered thirty-five pumpkins. How many did they gather?
 ______ pumpkins
- 4. If a large pumpkin makes four pies, how many pumpkins are needed to make thirty-six pies?
 _____ pumpkins
- 6. David Livingstone, a Scottish missionary and explorer, spent many years in the area that is now Zambia. Today the population of Zambia is about nine million, ninety-three thousand. Write that number, using digits.
- 7. In 1451 Columbus was born in Genoa, Italy. In 1492 he discovered the New World. In 1500 he returned from his third voyage to the New World. How old was Columbus in 1500?
- 9. How many inches of snow would the South Pole get in a century?

 ______inches How many feet would it get? Write the remainder as a fraction. ______ feet



10. Complete these calendar pages for the year 1492.

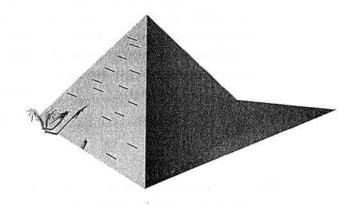


12. On September 6, the three ships of Columbus left the Canary Islands and sailed into the vast unknown waters. Columbus and his men saw no land until October 12. How many days were the *Niña*, *Pinta*, and *Santa Maria* on the open sea? _____ days

Story Problem Fun

- 13. The state flower of New York is the rose. How many roses are nine dozen roses? _____ roses
- **14.** If a dozen roses cost \$27.86, how much do eight dozen cost?

- 15. Tim gathered 42 roses. He gave an equal number of roses to his 7 sisters. How many roses did each sister get? _____ roses
- 16. Lloyd must pay \$2.16 to mail a card to Israel. He put three 55¢ stamps on the card. How much more postage does it need?
- **17.** Dustin left for church at 9:37. He arrived 15 minutes later. What time did he arrive at church?
- 18. Joseph's brothers came to Egypt to buy corn during the seven years of famine. Suppose they purchased 58 bushels. How many pecks did they buy?
- 19. Moses lived in Egypt when some of the pyramids were built. A pyramid has a square base and four triangular sides. Find the perimeter of the square base if one side was 288 feet.
 P = ______ feet



- 21. John baptized Jesus in the River Jordan. The Jordan empties into the Dead Sea, which is 1,310 feet below sea level. How many yards below sea level is the Dead Sea? Write the remainder as a fraction.

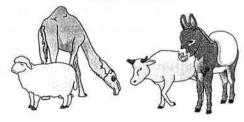
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Story Problem Fun

22.	The smallest official park is located in Oregon. The park is 24 inches across. How many feet is 24 inches? feet	2
24.	One section of the Big Wood River in Idaho is about 30.0 meters deep and only 1.2 meters wide. How much deeper than wide is that part of the river? meters	2
26.	South Dakota is home to the largest buffalo herd in the United States. Extremely large buffaloes may weigh $1\frac{1}{2}$ tons. How many pounds is $1\frac{1}{2}$ tons? pounds	2
28.	Before Satan troubled Job, Job had 7,000 sheep, 3,000 camels, 500 oxen, and 500 donkeys. God blessed Job for his faithfulness by giving him two times as many animals. How many animals did he have? sheep, camels, oxen, donkeys	2
30.	The apostle Paul was a tent maker. Suppose he had materials these lengths: $1\frac{3}{4}$ yd., $2\frac{1}{4}$ yd., $3\frac{3}{4}$ yd., and $2\frac{3}{4}$ yd. What was the total length?	é
	yd.	
32.	One lion can drag as much as 6 men. How many men would it take to drag as much as 12 lions?	é

- **23.** Agriculture makes up about $\frac{4}{100}$ of Oregon's gross product. Write $\frac{4}{100}$ as a decimal.
- 25. The oldest city in the United States is St. Augustine, Florida. It was founded in 1565 by the Spanish explorer Pedro Menéndez. About how many centuries old is the city?
 _____ centuries
- 27. The Gideons first placed Bibles in motel rooms in Montana. If the Gideons had 1,000 Bibles to put in 20 motels, how many Bibles could they put in each motel?

 Bibles
- 29. Before Satan troubled Job, Job had seven sons and each son had three sisters. How many children did Job have? _____ children



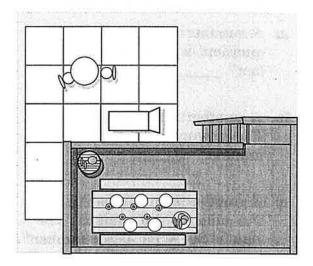
- 31. Suppose there were 43 lions in the den with Daniel. A male lion eats about 75 pounds of meat at one meal. How many pounds could 43 lions eat?
- 33. A decagon is a polygon with 10 sides. If the length of each side of a decagon is 21 cm, what is its perimeter? _____ cm

men

Brain Boosters

- 1. Prince Henry of Portugal used an astrolabe to guide his ship. The astrolabe was invented by the Greeks around 300 B.C. About how many years ago was the astrolabe invented? (Add to find year lapse if one year is A.D. and the other is B.C.)
- 2. The "teddy bear" was named after President Theodore Roosevelt. Suppose a store sold 2,358 teddy bears each month for one fourth of a year. How many bears would they sell during that time? bears

3. The Sharpe family plans to add a rectangular patio to their house. The balcony of the house covers part of the planned patio. Each square represents one square yard. How many square yards is the patio? sq. yd. How many square yards of the patio does the balcony cover? ____ sq. yd.



4. At 2:43 P.M., John Glenn landed in the Atlantic Ocean. At 3:24 P.M., he crawled out of *Friendship* 7. Set the clocks at the left to the two times and find the time lapse.

2:43 P.M.



3:24 P.M.

min. (time lapse)

5. Dr. Wilfred Grenfell, an English medical missionary, served the Eskimos living near the Arctic Circle. During his 40 years of service, he was a surgeon, scientist, sailor, and explorer. During one three-month period, he treated about 300 patients each month. How many patients did he treat during the three months? patients



Brain Boosters

- **6.** A package of fruit pops contains six pops. How many packages must be bought to give thirty-five children two pops each? (A fraction of a package cannot be bought.)

 packages
- 7. Grapes cost \$1.69 per pound and bananas cost 89¢ per pound.
 At that rate, how much would 3 pounds of bananas and 1 pound of grapes cost?

9. Honey is the only food that does

8. Answer the number riddles.

- **a.** A number is divided by 8. The quotient is 7. What is the number?
- **b.** A number is multiplied by 7. The product is 63. What is the number?
- **c.** A number is multiplied by 5. 3 is added to the product. The sum is 28. What is the number?
- **d.** A number is divided by 6. 1 is added to the quotient. The sum is 9. What is the number?
- 10. Some car license tags were made using the letter A and the numbers 1, 2, and 3. How many possible arrangements could begin with the letter A? _____ possibilities List the possibilities.

