

Dear Rising Up Seventh Grade Math Students,

Attached you will find a Math Summer Packet. The best way to keep up your math skills is to **practice, practice, and practice**. Please work on this packet and return it to me during the first week of school. You will receive a special award for your efforts. Have a great summer and I look forward to Math in the Fall!

God Bless,
Mrs. Richards

ORDER OF ARITHMETIC OPERATIONS

Evaluate each expression.

1. $4 + 3 - 8 + 2$

2. $5 + 2 \times 6$

3. $18 - 5 \times 2$

4. $8 + 3 \times 10$

5. $7 + 3 \times 5 - 11$

6. $9 \times 0 + 1 \times 8 - 2 \times 3$

7. $(11 - 5) \times 3$

8. $3(5 + 2 - 1)$

9. $6 \times 5 + 7 \times 2 - 11 \times 3 - 4$ 10. $0.3(2.5 + 1.7 - 3.2)$

11. $2.1 + 4.0(3.2 - 1.6)$

12. $(\frac{2}{3})(18 - 7 + 1 - \frac{3}{2})$

13. $1.30(0.04 + 2.13 - 1.07)$

14. $3(14 + 3) - 9 \times 4$

15. $3^2 - 2^2 + 1$

16. $2^3 - 2^2 + 2$

17. $(\frac{1}{2})(17 - 5) + 4$

18. $32 - 2(3 + 1)$

19. $(\frac{2}{3})(10 - 1) + (\frac{1}{3})(19 - 4)$

20. $(\frac{2}{5})(15 - 3 + 3 - 10)$

21. $6^2 - 5^2 + 4^2 - 3^2 + 2^2 - 1^2$

22. $3^3 + 2^3 + 1^3$

23. $\frac{30 - 6}{4 \times 2}$

24. $\frac{3 \times 4 \times 5 \times 6}{8 \times 9}$

25. $\frac{4^2 - 2 \times 3}{2 \times 5}$

26. $\frac{3 \times 4 + 6 \times 8 - 2 \times 3}{2 \times 3}$

27. $\frac{4 \times 6 - 2 \times 3 + 9 \times 24}{2 \times 3}$

28. $\frac{(24 - 8)(5 - 2)(8 - 7)}{5 - 2}$

EQUIVALENT FRACTIONS

Fill in the missing numerator or denominator.

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

2. $\frac{9}{11} = \frac{27}{\quad}$

3. $\frac{3}{5} = \frac{12}{\quad}$

4. $\frac{8}{3} = \frac{\quad}{21}$

5. $\frac{1}{7} = \frac{7}{\quad}$

6. $\frac{9}{1} = \frac{\quad}{7}$

7. $\frac{18}{24} = \frac{\quad}{8}$

8. $\frac{45}{9} = \frac{15}{\quad}$

9. $\frac{81}{27} = \frac{\quad}{3}$

10. $\frac{-3}{8} = \frac{36}{\quad}$

11. $\frac{0}{3} = \frac{\quad}{10}$

12. $\frac{8}{1} = \frac{\quad}{8}$

13. $\frac{\quad}{-15} = \frac{3}{5}$

14. $\frac{\quad}{-18} = \frac{-5}{2}$

15. $\frac{-28}{8} = \frac{7}{\quad}$

16. $\frac{-77}{70} = \frac{11}{\quad}$

17. $\frac{-18}{\quad} = \frac{-9}{13}$

18. $\frac{-3}{\quad} = \frac{3}{2}$

19. $\frac{-26}{4} = \frac{13}{\quad}$

20. $\frac{-3}{2} = \frac{4.5}{\quad}$

21. $\frac{-104}{\quad} = \frac{8}{3}$

22. $\frac{6}{\quad} = \frac{-1}{4.5}$

23. $\frac{32.5}{\quad} = \frac{-6.5}{1.3}$

24. $\frac{-3.7}{25.9} = \frac{\quad}{7}$

25. $\frac{\quad}{-2.25} = \frac{19}{9}$

26. $\frac{3 - 2}{\quad} = \frac{-3 + 2}{6}$

27. $\frac{1}{33} = \frac{33}{\quad}$

RECIPROCAL

For each expression, write its reciprocal as a positive or negative whole number, proper fraction, or mixed number in simplest form.

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

2. $\frac{7}{8}$

3. 32

4. $\frac{-1}{89}$

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

6. $-\frac{19}{76}$

7. $\frac{2.8}{-7}$

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

9. $\frac{8.3}{5}$

10. $\frac{-81}{-27}$

11. $8\frac{7}{8}$

12. 23.5

13. $\frac{1}{23.5}$

14. $-\frac{24}{-9.6}$

15. $-2\frac{7}{8}$

16. $\frac{32}{9}$

17. $13\frac{7}{8}$

18. $\frac{1}{2} \div \frac{2}{3}$

19. $\frac{9}{10} \div 0.9$

20. $-3\frac{2}{3} \div \frac{9}{3}$

21. $(2\frac{1}{2})^2$

22. $(-\frac{1}{2})^3$

23. $\sqrt{9}$

24. $-\sqrt{121}$

25. $(\frac{1}{8})^3$

26. $(-\frac{2}{3})^4$

27. $\frac{2.3}{-8.1}$

ADDING AND SUBTRACTING FRACTIONS

Find the sums, and write each one in simplest form.

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

2. $\frac{2}{9} + \frac{4}{9}$

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

4. $\frac{2}{7} + \frac{3}{7}$

5. $\frac{7}{10} + \frac{1}{5}$

6. $\frac{2}{5} + \frac{4}{15}$

7. $\frac{2}{5} + \frac{1}{2}$

8. $\frac{2}{9} + \frac{1}{4}$

9. $\frac{2}{9} + \frac{1}{9} + \frac{4}{9}$

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

11. $\frac{1}{2} + \frac{1}{4} + \frac{1}{8}$

12. $\frac{2}{5} + \frac{1}{7} + \frac{2}{7}$

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

14. $\frac{1}{3} + \frac{3}{8} + \frac{1}{6}$

Find the differences, and simplify if possible.

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

16. $\frac{3}{10} - \frac{1}{10}$

17. $\frac{5}{12} - \frac{3}{12}$

18. $\frac{13}{16} - \frac{5}{16}$

19. $\frac{5}{8} - \frac{1}{4}$

20. $\frac{7}{16} - \frac{3}{32}$

21. $\frac{5}{9} - \frac{1}{3}$

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

23. $\frac{3}{4} - \frac{1}{6}$

24. $\frac{7}{14} - \frac{3}{8}$

25. $\frac{1}{2} - \frac{2}{9}$

26. $\frac{1}{3} - \frac{5}{16}$

27. $(\frac{3}{8} + \frac{1}{4}) - \frac{1}{2}$

28. $(\frac{2}{3} - \frac{1}{4}) + \frac{1}{8}$

ROUNDING MEASUREMENTS

Round each measurement to the nearest unit.

- | | |
|---------------|---------------|
| 1. 283.9 m | 2. 297.4 g |
| 3. 18.93 L | 4. 19.8 g |
| 5. 397.82 cm | 6. 500.5 L |
| 7. 1,386.49 m | 8. 209.8 mm |
| 9. 3.32 m | 10. 368.71 cm |
| 11. 132.48 g | 12. 8.39 cm |

Round each measurement to the nearest tenth of a unit.

- | | |
|---------------|---------------|
| 13. 2.739 cm | 14. 3.505 cm |
| 15. 5.75 mg | 16. 36.80 m |
| 17. 16.49 mg | 18. 93.09 g |
| 19. 23.47 g | 20. 182.74 cm |
| 21. 100.05 cm | 22. 68.03 cm |
| 23. 79.973 L | 24. 90.951 cm |

Round each measurement to the nearest hundredth of a unit.

- | | |
|------------------------|-------------------------|
| 25. 0.037 m | 26. 0.005 m |
| 27. 0.213 m | 28. 2.153 m |
| 29. 1.949 m | 30. 2.997 m |
| 31. 4.096 cm | 32. 6.007 L |
| 33. 2.0359 light years | 34. 8.0982 g |
| 35. 32.005 m | 36. 17.0961 light years |

ADDING AND SUBTRACTING MIXED NUMBERS

Find the sums, and write each answer as a mixed number in simplest form.

$$1. \quad \begin{array}{r} 2\frac{5}{12} \\ + 3\frac{1}{12} \\ \hline \end{array}$$

$$2. \quad \begin{array}{r} 5\frac{1}{8} \\ + 4\frac{3}{8} \\ \hline \end{array}$$

$$3. \quad \begin{array}{r} 1\frac{3}{8} \\ + 5\frac{1}{4} \\ \hline \end{array}$$

$$4. \quad \begin{array}{r} 3\frac{1}{4} \\ + \frac{7}{8} \\ \hline \end{array}$$

$$5. \quad \begin{array}{r} 7\frac{3}{8} \\ + 5 \\ \hline \end{array}$$

$$6. \quad \begin{array}{r} 9\frac{2}{3} \\ + 2\frac{1}{8} \\ \hline \end{array}$$

$$7. \quad \begin{array}{r} 3\frac{5}{12} \\ + 4\frac{2}{9} \\ \hline \end{array}$$

$$8. \quad \begin{array}{r} 8\frac{8}{15} \\ + 3\frac{7}{9} \\ \hline \end{array}$$

$$9. \quad 2\frac{4}{9} + 6\frac{2}{3}$$

$$10. \quad 7\frac{5}{16} + 2\frac{11}{12}$$

$$11. \quad \frac{7}{8} + 3\frac{5}{16}$$

$$12. \quad 8\frac{5}{9} + \frac{11}{24}$$

$$13. \quad 2\frac{1}{2} + 3\frac{3}{4} + 5\frac{5}{8}$$

$$14. \quad 1\frac{3}{16} + 2\frac{7}{12} + 3\frac{1}{4}$$

Find each difference, and write each answer as a mixed number in simplest form.

$$15. \quad \begin{array}{r} 2\frac{3}{8} \\ - 1\frac{1}{8} \\ \hline \end{array}$$

$$16. \quad \begin{array}{r} 5\frac{5}{12} \\ - 2\frac{1}{4} \\ \hline \end{array}$$

$$17. \quad \begin{array}{r} 3\frac{9}{12} \\ - 1\frac{1}{4} \\ \hline \end{array}$$

$$18. \quad \begin{array}{r} 8\frac{9}{32} \\ - 3\frac{5}{8} \\ \hline \end{array}$$

$$19. \quad \begin{array}{r} 2\frac{3}{5} \\ - 1\frac{9}{10} \\ \hline \end{array}$$

$$20. \quad \begin{array}{r} 8\frac{2}{9} \\ - 3\frac{5}{12} \\ \hline \end{array}$$

$$21. \quad \begin{array}{r} 3\frac{3}{4} \\ - 2\frac{3}{8} \\ \hline \end{array}$$

$$22. \quad \begin{array}{r} 3\frac{3}{8} \\ - 2\frac{3}{4} \\ \hline \end{array}$$

$$23. \quad 1\frac{1}{5} - \frac{7}{8}$$

$$24. \quad 2\frac{1}{6} - 1\frac{5}{6}$$

$$25. \quad 4\frac{9}{32} - 2\frac{1}{8}$$

$$26. \quad 3\frac{8}{9} - 1\frac{11}{12}$$

$$27. \quad (5\frac{3}{8} - 2\frac{1}{8}) + 6\frac{1}{3}$$

$$28. \quad 6\frac{5}{9} - (2\frac{2}{3} + 1\frac{3}{4})$$

MULTIPLYING AND DIVIDING MIXED NUMBERS

Find the products and write your answers as mixed numbers in simplest form.

1. $3\frac{3}{4} \times 5\frac{1}{4}$

2. $3\frac{5}{8} \times 2\frac{3}{4}$

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

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

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

6. $8\frac{1}{6} \times 1\frac{1}{6}$

7. $1\frac{1}{2} \times 3\frac{7}{8}$

8. $4\frac{3}{5} \times 3\frac{1}{3}$

9. $1\frac{5}{6} \times 2\frac{3}{5}$

10. $1\frac{7}{8} \times 4\frac{4}{7}$

11. $\frac{1}{2} \times 1\frac{1}{3} \times 2\frac{3}{4}$

12. $\frac{3}{4} \times 2\frac{1}{3} \times \frac{1}{5}$

13. $1\frac{1}{4} \times 1\frac{3}{5} \times 1\frac{1}{2}$

14. $1\frac{3}{4} \times \frac{4}{7} \times 8\frac{1}{2}$

Find the quotients and write your answers as mixed numbers in simplest form.

15. $1\frac{2}{3} \div 3\frac{3}{8}$

16. $2\frac{5}{6} \div \frac{7}{8}$

17. $\frac{7}{8} \div 2\frac{5}{6}$

18. $2\frac{1}{2} \div 3\frac{7}{12}$

19. $3\frac{1}{8} \div 4$

20. $4 \div 3\frac{1}{8}$

21. $2\frac{3}{16} \div 1\frac{1}{3}$

22. $6\frac{7}{8} \div 8\frac{1}{8}$

23. $3\frac{1}{7} \div 2\frac{3}{5}$

24. $2\frac{1}{2} \div 1\frac{2}{3}$

25. $3 \div (\frac{1}{2} \times \frac{1}{4})$

26. $1\frac{1}{3} \div (9\frac{1}{4} \times 4)$

27. $1\frac{1}{2} \times (\frac{2}{3} \div 5)$

28. $3\frac{3}{7} \div (\frac{3}{12} \times 2\frac{1}{3})$

PROBLEM SOLVING WITH FRACTIONS AND MIXED NUMBERS

1. Yesterday Jose worked on his homework $\frac{2}{3}$ of an hour at school and $\frac{3}{4}$ of an hour at home. How many hours did he spend on homework?
2. Stephanie sold $1\frac{1}{2}$ pecks of tomatoes on Friday, $3\frac{1}{3}$ pecks on Saturday, and $2\frac{1}{4}$ pecks on Sunday. How many pecks of tomatoes did she sell during these three days?
3. Jonathan is permitted to watch three hours of television on Saturday. If he watched TV for $1\frac{1}{4}$ hours in the morning and $\frac{1}{2}$ hour in the afternoon, how many hours may he watch TV on Saturday evening?
4. David read $\frac{2}{3}$ of a 275 page book last weekend. How many pages did he read?
5. Phillip's bowling handicap is 18 pins, and Elaine's handicap is $\frac{2}{3}$ of Phillip's handicap. How many pins is Elaine's handicap?
6. Pam gets paid \$2.40 per hour for babysitting. Last week she sat $2\frac{1}{2}$ hours at the Stout residence, $4\frac{3}{4}$ hours at the Bradshaw residence, and $1\frac{2}{3}$ hours at the Woodley residence. How much money did she earn last week?
7. Heather spent $\frac{2}{3}$ of her \$7.50 allowance at a movie. How many dollars does she have left?
8. Jim can run the 40-yard dash in $4\frac{1}{4}$ seconds. Franco claims he can run the forty in $\frac{4}{5}$ of Jim's time. If Franco is right, how many seconds would it take him to run 40 yards?
9. Cliff cut Mr. Knoll's lawn and trimmed his hedges in $2\frac{1}{2}$ hours. Mr. Knoll paid him $8\frac{1}{2}$ dollars. How much did Cliff make per hour?
10. A T-shirt manufacturer uses $\frac{5}{8}$ yard of material for each shirt. How many shirts can be made from $14\frac{3}{8}$ yards of material?
11. A cookie recipe that makes 2 dozen cookies calls for $1\frac{1}{3}$ cups of sugar. How much sugar is needed to make 10 dozen cookies?
12. Steve has $8\frac{1}{2}$ cups of concentrated laundry powder. Each load of laundry requires $\frac{1}{4}$ cup of powder. How many loads of laundry can he do?

ADDING AND SUBTRACTING DECIMAL NUMBERS

Find each of these sums.

$$\begin{array}{r} 1. \quad 3.5 \\ + 6.4 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 23.7 \\ + 16.4 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 286.7 \\ + 413.2 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 23.47 \\ + 18.35 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 23.8 \\ + 84.3 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 2.34 \\ + 8.71 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 83.4 \\ + 17.3 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 16.003 \\ + 14.283 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \$3.81 \\ + \$8.34 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad \$40.36 \\ + \$9.98 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad \$23.69 \\ + \$89.47 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad \$134.49 \\ + \$217.88 \\ \hline \end{array}$$

$$13. \quad 2.63 + 18.89 + 36.54$$

$$14. \quad \$5.83 + \$12.69 + \$19.81$$

Find each difference.

$$\begin{array}{r} 15. \quad 8.4 \\ - 6.1 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 26.7 \\ - 12.5 \\ \hline \end{array}$$

$$\begin{array}{r} 17. \quad 8.69 \\ - 6.43 \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad 69.75 \\ - 23.62 \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad 8.3 \\ - 6.7 \\ \hline \end{array}$$

$$\begin{array}{r} 20. \quad 23.8 \\ - 18.2 \\ \hline \end{array}$$

$$\begin{array}{r} 21. \quad 132.4 \\ - 63.2 \\ \hline \end{array}$$

$$\begin{array}{r} 22. \quad 327.64 \\ - 136.56 \\ \hline \end{array}$$

$$\begin{array}{r} 23. \quad \$53.81 \\ - 16.42 \\ \hline \end{array}$$

$$\begin{array}{r} 24. \quad \$20.37 \\ - 16.41 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad \$100.89 \\ - 20.98 \\ \hline \end{array}$$

$$\begin{array}{r} 26. \quad \$631.84 \\ - 163.92 \\ \hline \end{array}$$

$$27. \quad 358.24 - 164.53$$

$$28. \quad \$823.48 - \$169.23$$

MULTIPLYING AND DIVIDING DECIMAL NUMBERS

Find each of these products.

1.
$$\begin{array}{r} 2.3 \\ \times 0.2 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 13.4 \\ \times 0.3 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 13.7 \\ \times 0.06 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 23.1 \\ \times 0.8 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 18.2 \\ \times 1.3 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 16.8 \\ \times 5.7 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 4.18 \\ \times .65 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 32.65 \\ \times 3.2 \\ \hline \end{array}$$

9.
$$\begin{array}{r} \$23.71 \\ \times 0.07 \\ \hline \end{array}$$

10.
$$\begin{array}{r} \$13.64 \\ \times 0.38 \\ \hline \end{array}$$

11.
$$\begin{array}{r} \$38.69 \\ \times 0.67 \\ \hline \end{array}$$

12.
$$\begin{array}{r} \$1.36 \\ \times 0.06 \\ \hline \end{array}$$

13. $3.2 \times 8.7 \times 2.5$

14. $6.7 \times 8.9 \times 0.5$

Find each of the following quotients.

15. $4 \overline{)4.84}$

16. $0.4 \overline{)39.2}$

17. $1.2 \overline{)1.92}$

18. $4.3 \overline{)3741}$

19. $2.1 \overline{)18.69}$

20. $0.3 \overline{)24.06}$

21. $3.4 \overline{)5.508}$

22. $0.09 \overline{)0.8181}$

23. $6.2 \overline{)55.18}$

24. $0.27 \overline{)2.214}$

25. $.09 \overline{)520.29}$

26. $11.6 \overline{)4060}$

27. $(1.36 \times 0.7) \div (0.8)$

28. $(1088.1) \div (2.7 \times 1.3)$

PERCENTS AND DECIMAL FRACTIONS

Write each decimal number as a percent.

- | | | |
|-----------|-----------|------------|
| 1. .83 | 2. 0.07 | 3. 0.7 |
| 4. 1.35 | 5. 2.0 | 6. 0.66 |
| 7. 0.025 | 8. 0.1275 | 9. 17.3 |
| 10. 123.7 | 11. 0.005 | 12. 0.0125 |

Write each of these percents as a decimal number.

- | | | |
|-----------------------|-----------------------|-----------------------|
| 13. 85% | 14. 125% | 15. $10\frac{1}{2}\%$ |
| 16. $12\frac{1}{2}\%$ | 17. $18\frac{4}{5}\%$ | 18. $6\frac{1}{2}\%$ |
| 19. 750% | 20. $2\frac{7}{10}\%$ | 21. $8\frac{3}{4}\%$ |
| 22. $16\frac{3}{4}\%$ | 23. $1\frac{3}{8}\%$ | 24. $\frac{1}{8}\%$ |

For each of the following percents, select the decimal number that is equivalent to the given percent.

- | | | | | | |
|-----------------------|-------|-------|------|--------|--------|
| 25. $6\frac{1}{2}\%$ | _____ | .062 | 6.2 | .065 | 6.5 |
| 26. $2\frac{3}{10}\%$ | _____ | .23 | .023 | .2.3 | 23 |
| 27. 125% | _____ | 12.5 | .125 | 125 | 1.25 |
| 28. $1\frac{3}{4}\%$ | _____ | .0175 | .175 | 1.75 | .013 |
| 29. $16\frac{3}{8}\%$ | _____ | .163 | 16.3 | .16375 | 16.375 |
| 30. $20\frac{1}{5}\%$ | _____ | 20.5 | 2.5 | .202 | 2.02 |

PERCENTS AND COMMON FRACTIONS

Write each fraction as a percent.

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

2. $\frac{1}{5}$

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

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

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

6. $\frac{7}{10}$

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

8. $\frac{1}{16}$

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

10. $\frac{1}{20}$

11. $\frac{3}{50}$

12. $\frac{2}{25}$

Write each percent as a fraction in simplest form.

13. 30%

14. 25%

15. $5\frac{1}{2}\%$

16. $12\frac{1}{2}\%$

17. 19%

18. $15\frac{1}{2}\%$

19. $87\frac{1}{2}\%$

20. $6\frac{1}{2}\%$

21. $7\frac{3}{4}\%$

22. $20\frac{1}{2}\%$

23. $\frac{1}{2}\%$

24. $90\frac{1}{2}\%$

Write each mixed number as a percent.

25. $1\frac{1}{10}$

26. $1\frac{1}{5}$

27. $2\frac{1}{4}$

28. $3\frac{3}{4}$

29. $16\frac{4}{5}$

30. $3\frac{3}{8}$

31. $12\frac{3}{10}$

32. $1\frac{9}{20}$

33. $2\frac{7}{10}$

34. $1\frac{9}{10}$

35. $2\frac{1}{50}$

36. $1\frac{1}{16}$

Write each percent as a mixed number in simplest form.

37. 150%

38. 138%

39. 620%

40. 125%

41. 168%

42. 188%

43. 268%

44. 202%

ACTIVITIES WITH PERCENTS AND COMMON FRACTIONS

Write the answer for each statement.

1. $12\frac{1}{2}\%$ of 140 is _____
2. $8\frac{1}{4}\%$ of 400 is _____
3. $5\frac{1}{2}\%$ of 50 is _____
4. $5\frac{1}{2}\%$ of 16 is _____
5. $14\frac{1}{2}\%$ of 8,500 is _____
6. $7\frac{1}{2}\%$ of 16.8 is _____
7. $18\frac{1}{2}\%$ of 260 is _____
8. $3\frac{1}{4}\%$ of 300 is _____
9. $6\frac{2}{5}\%$ of 20 is _____
10. $13\frac{3}{4}\%$ of 8,000 is _____
11. $6\frac{1}{4}\%$ of 440 is _____
12. $8\frac{1}{5}\%$ of 240 is _____

Find the solution for each of these problems.

1. A basketball team won $33\frac{1}{3}\%$ of its 45 games. How many games did the team win?

2. A football player increased his base salary of \$300,000 by $12\frac{1}{2}\%$ through playoff bonuses. How many dollars were added to his salary?

3. Sara borrowed \$800 for one year from a loan company to help pay for a used car. Her interest rate was $15\frac{1}{2}\%$ for the year. How much interest will she pay the loan company?

4. Luis had 105 correct answers on a 120-question true/false test. What percent of his answers were correct?

5. The football coach told Greg to gain some weight for the new football season. Greg was able to add 11 pounds to his original weight of 200 pounds. What is the percent of his weight gain?

PROBLEM SOLVING WITH PERCENTS

1. Cheryl bought a bicycle that was priced at \$89.95. She also paid a 6% sales tax. How much sales tax did she pay?

What was the total amount that she paid for the bicycle?

2. A salesperson earns an 18% commission on every garage door he sells. One Saturday he sold 8 garage doors for \$129 each. How much was his commission for one door?

What was his total commission for selling 8 doors?

3. A department store is selling all of its shoes at 25% off the marked prices. Anthony bought a pair of shoes that was marked \$19.00. How much did he pay for the shoes?

4. Julie Anderson won the election for sophomore class president. One hundred thirty-five people voted for Julie, and 115 people voted for her opponent. What % of the votes did Julie get?

5. Dolores earns 8 cents for each newspaper she delivers. Last week she delivered 6 newspapers to each of her 45 customers. How much did she earn for delivering newspapers?

Dolores also received \$2.85 in tips last week. What were her total earnings for the week?

6. This year 116 men and 84 women ran the city marathon. What percent of the runners were women?

7. Last year only 60 women ran the marathon, and this year 84 women ran. What is the % increase for women runners?

8. In a large city 18% of the 3400 steel workers are unemployed. How many steel workers are out of work?

9. A mathematics test contained 18 questions. Rene answered 15 questions correctly. What % of her answers were correct?

10. Ms. Lateri is paid \$200 per week for selling homes. She receives a $1\frac{1}{4}$ percent commission on each home she sells. Last week she sold one home for \$45,000. How much did she earn last week?

RATIOS AND FRACTIONS

Change each ratio to a fraction in simplest form.

1. 300 miles on 12 gallons of gas
2. 8 out of 10 people
3. 280 miles in 6 hours
4. 18 successful free throws in 26 attempts
5. 270 yards gained on 25 passes
6. 3 quarts of water to 4 quarts of antifreeze
7. 16 cups of water to 4 cups of milk
8. 10 out of 12 correct answers
9. 80 votes out of 130 ballots cast
10. 4 out of 5 doctors
11. 6 finishes out of 10 marathon races attempted
12. 2 perfect 10s in 12 tries on the balance beam

Change each ratio to a fraction in simplest form.

- | | |
|---------------------------------|-----------------------------------|
| 13. 9 to 12 | 14. 16 to 14 |
| 15. 3 to 30 | 16. 13 to 52 |
| 17. 17 out of 76 | 18. 15 out of 20 |
| 19. 55 out of 105 | 20. 100 out of 210 |
| 21. 7 out of 56 | 22. 11 out of 78 |
| 23. 82 : 144 | 24. 13 : 78 |
| 25. 15 : 100 | 26. 16 : 21 |
| 27. 72 : 200 | 28. 3 : 33 |
| 29. 154 : 44 | 30. $\frac{1}{2} : 2$ |
| 31. $\frac{7}{8} : \frac{1}{4}$ | 32. $1\frac{3}{5} : \frac{2}{10}$ |