

Decimal Addition and Subtraction:

Find the sum or difference. Remember to line up the decimals before adding or subtracting so you are working with equal-sized pieces. Bring the decimal straight down in your answer.

$$\begin{array}{r} 1. \quad 7.75 \\ + 1.46 \\ \hline \end{array}$$

$$2. \quad 51 + 2.86$$

$$3. \quad .1274 + 8.25$$

$$\begin{array}{r} 4. \quad \quad \quad \\ \quad 38.16 \\ - 49.27 \\ \hline \end{array}$$

$$5. \quad 80 - 44.23$$

$$6. \quad 75.89 - 9.4$$

Decimal Multiplication:

Multiply as you would with whole numbers. The decimal placement in the product is based on the number of decimal places in the factors.

$$\begin{array}{r} 7. \quad \quad \quad \\ \quad .13 \\ \times 70 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad \quad \quad \\ \quad 5.1 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \quad \quad \\ \quad .108 \\ \times 2.5 \\ \hline \end{array}$$

Decimal Division:

Divide as you would with whole numbers. Bring the decimal point from the dividend straight up into the quotient. You continue dividing by adding zeros so there are no remainders.

$$10. \quad \quad \quad \begin{array}{r} 3 \overline{) 31.8} \end{array}$$

$$11. \quad \quad \quad \begin{array}{r} 15 \overline{) 0.825} \end{array}$$

$$12. \quad \quad \quad \begin{array}{r} 12 \overline{) 366.} \end{array}$$

Decimal Comparisons: Compare each pair of decimals using $<$, $>$, or $=$.

13. $0.306 \bigcirc 0.39$

14. $2.14 \bigcirc 2.038$

15. $0.47 \bigcirc 0.452$

Prime Number: A whole number greater than 1 that has only two factors, 1 and itself.

Examples, 2, 3, 5, 7, 11, 13, 17, and 19 are the primes from 1 to 20.

Composite Number: A whole number greater than 1 that has more than two factors.

Example: 8 is a composite number since its factors are 1, 2, 4, 8.

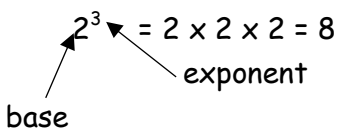
Determine if the following numbers are prime or composite. If the numbers are composite, list all of the factors.

16. 27: _____

17. 43: _____

18. 49: _____

Exponents: Exponents are a way to show the repeated multiplication of the same factor, the base number.

example: $2^3 = 2 \times 2 \times 2 = 8$


Solve the following expressions by writing the expanded notation (repeated multiplication), and then find the value.

19. 6^2

20. 2^6

21. 3^4

22. eight squared

23. five cubed

<p>Greatest Common Factor (GCF) The largest factor that 2 or more numbers have in common.</p> <ol style="list-style-type: none"> 1. List the factors of each number. 2. List the common factors. 3. Identify the greatest common factor. 	<p>Least Common Multiple (LCM) The smallest nonzero multiple that two or more numbers have in common.</p> <ol style="list-style-type: none"> 1. List the multiples of each number. 2. Find the smallest multiple common to both numbers.
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Find the *GCF* and *LCM* for each pair of numbers. Show your work.

24.	24 and 28	
	<i>GCF</i>	<i>LCM</i>

25.	18 and 21	
	<i>GCF</i>	<i>LCM</i>

Comparing Fractions

Compare each pair of numbers. Write the correct comparison symbol ($<$, $>$, $=$) in each circle. Make sure you have common denominators before comparing numerators.

example:

$$\begin{array}{ccc} \frac{1}{3} & \bigcirc < & \frac{3}{4} \\ \downarrow & & \downarrow \\ \frac{4}{12} & & \frac{9}{12} \end{array}$$

26.

$$\frac{3}{7} \bigcirc \frac{1}{4}$$

27.

$$\frac{3}{5} \bigcirc \frac{5}{6}$$

28.

$$\frac{7}{8} \bigcirc \frac{3}{4}$$

Ordering Fractions

Order the following fractions from **least to greatest**.

29.

$$\frac{1}{2} \quad \frac{1}{4} \quad \frac{1}{6} \quad \frac{1}{3} \quad \frac{1}{5}$$

30.

$$\frac{1}{2} \quad \frac{5}{16} \quad \frac{30}{64} \quad \frac{3}{8} \quad \frac{9}{32}$$

Order of Operations

Solve the following problems. Show your work. Be sure to follow the order of operations.

Parentheses

Exponents

Multiplication or Division-left to right

Addition or Subtraction-left to right

Example: $8 - 4 \div 2 + 2$
 $8 - 2 + 2$
 $6 + 2$
 8

31. $15 + 8 \times 3$

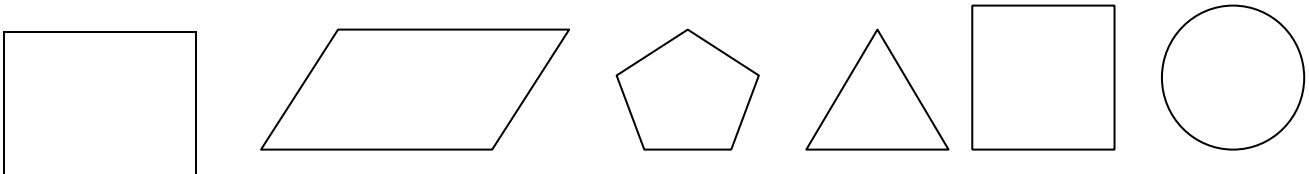
32. $(30 + 8) \times 6 - 1$

33. $(30 + 8) \times (6-1)$

34. $(29 - 18) + 14 \div 2 + 6$

Geometry-Who am I?

Use the shapes pictured below to answer the questions. Use the NAME of the shape, not a drawing, to fill in the blank.



35. I am a 2 dimensional shape that has four sides. I have four 90 degree angles. I have two sets of parallel lines. I also have two sides that are one length, and my other two sides are a different length.

Who am I? _____

36. I am a 2 dimensional shape that has four sides. I have two obtuse angles and two acute angles. I have two different sets of parallel sides. I also have two sides that are one length, and my other two sides are a different length.

Who am I? _____

37. I am a 2 dimensional shape that has all obtuse angles. I do not have any sides that are parallel.

Who am I? _____

38. I am a 2 dimensional shape. My perimeter is also known as a circumference.

Who am I? _____

Adding Fractions and Mixed Numbers

Add the following fractions and mixed numbers. Make sure you have common denominators before adding. Remember, you only add the numerator, and you keep the denominator the same. Simplify your final answers.

example:
$$\frac{1}{3} + \frac{1}{5}$$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \frac{5}{15} + \frac{3}{15} = \frac{8}{15} \end{array}$$

39. $2\frac{3}{8} + 1\frac{1}{4}$

40. $\frac{7}{9} + 1\frac{5}{6}$

41. $3\frac{1}{3} + 2\frac{7}{10}$

Subtracting Fractions and Mixed Numbers

Subtract the following fractions and mixed numbers. Make sure you have common denominators before subtracting. Remember, you only subtract the numerator, and you keep the denominator the same. Simplify your final answers.

example:
$$2\frac{1}{3} - \frac{1}{5}$$

$$\begin{array}{r} \downarrow \quad \downarrow \\ 2\frac{5}{15} - \frac{3}{15} = 2\frac{2}{15} \end{array}$$

example with "borrowing":
$$2\frac{1}{3} - 1\frac{4}{5}$$

$$\begin{array}{r} 1 \quad 20 \\ \cancel{2} \frac{5}{15} - 1\frac{12}{15} = \frac{8}{15} \end{array}$$

42. $4\frac{5}{9} - 1\frac{5}{6}$

43. $2\frac{3}{5} - 2\frac{1}{4}$

44. $3\frac{2}{3} - 1\frac{1}{4}$

Multiplying Fractions and Mixed Numbers

Multiply the following fractions and mixed numbers. Remember that mixed numbers need to be converted to improper fractions first. Multiply the numerators, and then multiply the denominators. Simplify, if necessary.

example: $\frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$

example: $2\frac{1}{3} \times \frac{4}{5} = \frac{7}{3} \times \frac{4}{5} = \frac{28}{15} = 1\frac{13}{15}$

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

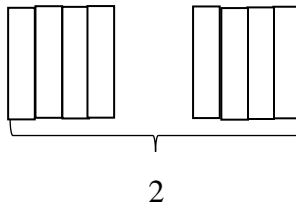
46. $4 \times 2\frac{3}{4}$

47. $3\frac{1}{3} \times \frac{9}{10}$

Dividing Whole Numbers by Fractions

You can use models to show how a whole number is divided by a fraction.

example: $2 \div \frac{1}{4} = 8$



Draw a model for each problem below. Then write the quotient.

48. $3 \div \frac{1}{4} = \underline{\hspace{2cm}}$

49. $2 \div \frac{1}{3} = \underline{\hspace{2cm}}$

50. $4 \div \frac{1}{2} = \underline{\hspace{2cm}}$