

## **Excel Math Placement Tests**

A grade-level evaluation tool

Attached are six tests that can be used to evaluate a student's preparedness for Excel Math. The tests are labeled A - F, which correspond to first - sixth grade. The test questions cover concepts that are considered review from the prior year.

### ***A note about Excel Math concept strategy:***

Typically the first six weeks of a grade will review content presented during the first two-thirds of the prior year. If students have trouble with the evaluation test for a particular grade, it shows they have only a partial grasp of the previous year's work. It may be difficult for them to work through one lesson per day.

After the first six weeks, the Lesson Sheets will introduce new concepts and concepts from the end of the prior year; therefore, progress will be slower than the first six weeks.

The evaluation tests are cumulative. Sometimes concepts are not tested because the students have already shown mastery on the test for the prior year.

We suggest you give students one or more tests depending on your knowledge of their ability level. We also recommend you administer basic fact timed tests as a part of the readiness assessment.

There are more factors involved in measuring a student's grade level readiness than how they score on these tests. However as a general rule, as the student progresses through the tests, the last placement test that the student completed successfully indicates their current grade level readiness. Success would be defined as answering most of the 20 problems correctly.

**Test A.** Successful completion demonstrates readiness for first grade and covers the following concepts:

- writing the numerals 0 - 9
- counting up to 20 items
- recognizing how the number of items in one set compares to the number of items in another set
- filling in missing one-digit numbers in sequences when counting up or down by one
- addition facts with sums less than eleven
- subtraction facts with minuends less than 6
- recognizing circles, squares, triangles and rectangles

**Test B.** Successful completion demonstrates readiness for second grade and covers the following concepts:

- recognizing any number words for numbers (without a hyphen) less than 100
- calculating a number one more or less than another two-digit number
- recognizing the symbols:  $<$ ,  $>$ , and  $=$
- putting three numbers in order from least in value to greatest in value
- addition facts with sums less than 16
- subtraction facts with minuends less than twelve
- subtraction of two-digit numbers, without regrouping
- addition of two-digit numbers, with regrouping with sums of ten
- one-step addition and subtraction story problems

A basic fact timed test on addition facts with sums up to ten and one on subtraction facts with minuends up to ten.

**Test C.** Successful completion demonstrates readiness for third grade and covers the following concepts:

- recognizing place value for ones, tens, and hundreds
- recognizing any number words for numbers less than 100
- filling in missing two-digit numbers in sequences when counting by 1, 2, 5, or 10
- recognizing the symbols:  $<$ ,  $>$ ,  $=$ , and  $\neq$
- putting four two-digit numbers in order from least value to greatest value
- addition facts with sums up to 18
- subtraction facts with minuends up to 18
- addition of two-digit numbers with regrouping using addition facts with sums up to 18
- subtraction of two-digit numbers with regrouping using subtraction facts with minuends up to 13
- addition and subtraction of three-digit numbers, without regrouping

A basic fact timed test on addition facts with sums up to 18 and one on subtraction facts with minuends up to 18.

**Tests D1 & D2.** Successful completion demonstrates readiness for fourth grade and covers the following concepts:

- recognizing place value for ones, tens, hundreds, and thousands
- recognizing any number words for numbers less than 10,000
- filling in missing two-digit numbers in sequences when counting by 1, 2, 3, 4, 5, or 10
- putting three four-digit numbers in order from least value to greatest value and from greatest value to least value
- addition of four-digit numbers when the sum to be regrouped is greater than 20
- subtraction of four-digit numbers with regrouping
- multiplication of a three-digit number by a one-digit number, regrouping twice, using the multiplication facts with products up to 30 or products with 5 as a factor
- division facts with dividends up to 20 and dividends with 5 as a factor
- division with a one-digit divisor, one-digit quotient with a remainder and a dividend less than 20
- division with a one-digit divisor, two-digit quotient and a dividend less than 100, no regrouping or remainders, using division facts less than ten
- recognize numerator and denominator
- recognize odd and even numbers less than 100
- calculating the number of fractional parts in a whole
- calculating one half of a group of items
- calculating the time before or after the hour
- filling in missing numbers in simple algebraic equations
- two-step story problems involving addition, subtraction, multiplication or division

A basic fact timed test on multiplication facts with products up to 30 and one on division facts with dividends up to 20 and dividends with 5 as a factor.

**Tests E1 & E2.** Successful completion demonstrates readiness for fifth grade and covers the following concepts:

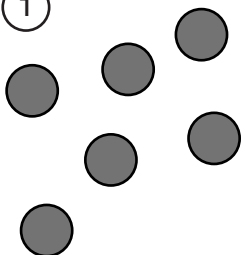
- recognizing place value up through trillions
- recognizing any number words for numbers less than one million
- filling in missing three-digit numbers in sequences when counting by 1 - 12 or by varying differences
- comparing four-digit numbers using the symbols:  $<$ ,  $>$ ,  $=$ , and  $\neq$
- multiplication of a two-digit number by a two-digit number
- division with a one-digit divisor, four-digit dividend and a three-digit quotient with regrouping and remainders, using division facts with dividends up to 50 and dividends with 10 (up to 90), 11 (up to 99) and 12 (up to 48) as factors
- division with a two-digit divisor, a one-digit quotient and a dividend less than 100 with remainders
- addition and subtraction of mixed numbers with like denominators
- changing improper fractions to mixed numbers
- completing fractions for equivalent fractions
- rounding two-digit numbers to the nearest ten
- filling in missing numbers in algebraic equations involving parentheses
- calculating area and perimeter for a rectangle that has been drawn to scale
- recognizing faces, edges and vertices on three-dimensional figures
- identifying diagonals and lines that are perpendicular or parallel
- multi-step story problems

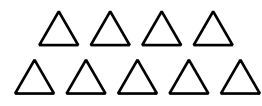
A basic fact timed test on multiplication facts with products up to 81 and one on division facts with dividends up to 50 and dividends with 10 (up to 90), 11 (up to 99) and 12 (up to 48) as factors.

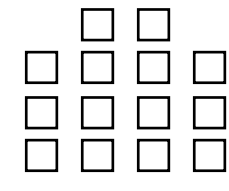
**Tests F1 & F2.** Successful completion demonstrates readiness for sixth grade and covers the following concepts:

- recognizing the tenths, hundredths and thousandths places
- multiplication of a three-digit number by a three-digit number
- division with a one-digit divisor, four-digit dividend and a three-digit quotient with regrouping and remainders, using division facts with dividends up to 81
- division with a two-digit divisor, a two-digit quotient and a three-digit
- recognizing, equilateral, isosceles and scalene triangles
- multiplication of fractions
- addition and subtraction of decimal numbers
- addition and subtraction of mixed numbers with unlike denominators
- solving story problems using averages and reasoning

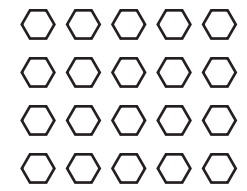
A basic fact timed test on multiplication facts with products up to 81, including regrouping addition, one on division facts with dividends up to 81, and one on division facts with dividends up to 50, including regrouping subtraction.

①  \_\_\_\_\_

②  \_\_\_\_\_

③  \_\_\_\_\_

④  \_\_\_\_\_

⑤  \_\_\_\_\_

Fill in the missing numbers.

⑥ ( 2, 3, 4, \_\_\_\_\_, \_\_\_\_\_ )

⑦ ( 10, 9, 8, \_\_\_\_\_, \_\_\_\_\_ )

⑧ 
$$\begin{array}{r} 3 \\ + 4 \\ \hline \end{array}$$

⑨ 
$$\begin{array}{r} 9 \\ + 1 \\ \hline \end{array}$$

⑩ 
$$\begin{array}{r} 7 \\ + 2 \\ \hline \end{array}$$

⑪ 
$$\begin{array}{r} 0 \\ + 6 \\ \hline \end{array}$$

⑫ 
$$\begin{array}{r} 5 \\ + 5 \\ \hline \end{array}$$

⑬ 
$$\begin{array}{r} 5 \\ - 3 \\ \hline \end{array}$$

⑭ 
$$\begin{array}{r} 3 \\ - 0 \\ \hline \end{array}$$

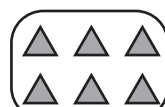
⑮ 
$$\begin{array}{r} 4 \\ - 4 \\ \hline \end{array}$$

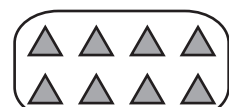


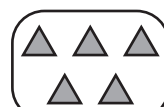
⑯ Which choice has 1 more than the number of triangles shown above?

⑰ Which choice has 1 less than the number of triangles shown above?

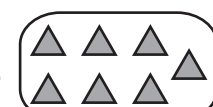
⑱ Which choice has the same number of triangles shown above?

A. \_\_\_\_\_  


B. \_\_\_\_\_  


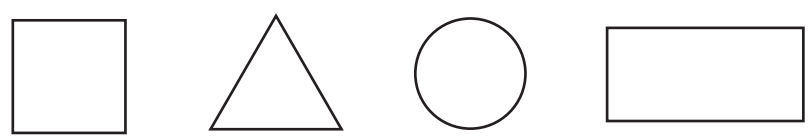
C. \_\_\_\_\_  


D. \_\_\_\_\_  


E. \_\_\_\_\_  


⑲ Put an X on the circle.

⑳ Draw a line around the triangle.



①

$$\begin{array}{r} 14 \\ 20 \\ + 34 \\ \hline \end{array}$$

②

$$\begin{array}{r} 64 \\ + 16 \\ \hline \end{array}$$

③

$$\begin{array}{r} 5 \\ + 9 \\ \hline \end{array}$$

④

$$\begin{array}{r} 7 \\ + 4 \\ \hline \end{array}$$

⑤

$$\begin{array}{r} 21 \\ + 9 \\ \hline \end{array}$$

⑥

$$\begin{array}{r} 5 \\ 4 \\ + 3 \\ \hline \end{array}$$

⑦

$$\begin{array}{r} 86 \\ - 25 \\ \hline \end{array}$$

⑧

$$\begin{array}{r} 94 \\ - 30 \\ \hline \end{array}$$

⑨

$$\begin{array}{r} 10 \\ - 6 \\ \hline \end{array}$$

⑩

$$\begin{array}{r} 11 \\ - 9 \\ \hline \end{array}$$

⑪

$$\begin{array}{r} 8 \\ - 2 \\ \hline \end{array}$$

⑫

Put the numbers in order from least to greatest.

( 27, 80, 19 )

\_\_\_\_\_

⑬

Select the correct symbol >, <, =.

19 ○ 91

⑭

What number is one more than twelve?

\_\_\_\_\_

⑮

What number is one less than ten?

\_\_\_\_\_

⑯

forty

\_\_\_\_\_

⑰

thirteen

\_\_\_\_\_

⑱

Fill in the missing numbers.

( 17, 18, 19, \_\_\_\_\_, \_\_\_\_\_ )

⑲

Eleven children were playing. Three went home. How many children are still playing?

\_\_\_\_\_

⑳

Paul drove six miles. Ann drove seven miles. How many miles did they drive in all?

\_\_\_\_\_

①  
4 ones and  
2 hundreds  
  
\_\_\_\_\_

②  
5 hundreds  
and 6 tens  
  
\_\_\_\_\_

③  
two hundred  
seventy  
  
\_\_\_\_\_

④  
one hundred  
three  
  
\_\_\_\_\_

⑤ Fill in the missing numbers.  
( \_\_\_\_\_, \_\_\_\_\_, 51, 53, 55 )      ( 80, 85, 90, \_\_\_\_\_, \_\_\_\_\_ )

⑥ Circle any number sentences that are true.  
 $24 \neq 24$        $43 < 34$        $56 < 65$        $78 = 87$

⑦ Put the numbers in order from  
least to greatest.  
( 76, 57, 67, 56 )  
  
\_\_\_\_\_

⑧  
$$\begin{array}{r} 436 \\ + 250 \\ \hline \end{array}$$

⑨  
$$\begin{array}{r} 21 \\ 132 \\ + 46 \\ \hline \end{array}$$

⑩  
$$\begin{array}{r} 24 \\ + 19 \\ \hline \end{array}$$

⑪  
$$\begin{array}{r} 38 \\ + 27 \\ \hline \end{array}$$

⑫  
$$\begin{array}{r} 46 \\ + 46 \\ \hline \end{array}$$

⑬  
$$\begin{array}{r} 19 \\ + 49 \\ \hline \end{array}$$

⑭  
$$\begin{array}{r} 852 \\ - 602 \\ \hline \end{array}$$

⑮  
$$\begin{array}{r} 789 \\ - 638 \\ \hline \end{array}$$

⑯  
$$\begin{array}{r} 43 \\ - 28 \\ \hline \end{array}$$

⑰  
$$\begin{array}{r} 50 \\ - 9 \\ \hline \end{array}$$

⑱  
$$\begin{array}{r} 72 \\ - 54 \\ \hline \end{array}$$

⑲ Matt went to the store and bought three pounds of apples, two pounds of pears and seven pencils. How many pounds of fruit did he buy?  
  
\_\_\_\_\_

⑳ Angela has six pens. Rachel has eight pens. Kate has nine pens. How many more pens does Kate have than Angela?  
  
\_\_\_\_\_

① 2 thousands and 6 tens

\_\_\_\_\_

② 5 ones, 3 thousands, and 6 hundreds

\_\_\_\_\_

③ one thousand, eight

\_\_\_\_\_

④ four thousand, ninety

\_\_\_\_\_

⑤ Put the numbers in order from greatest to least.

( 3,242; 3,224; 4,342; 4,324 )

\_\_\_\_\_

Fill in the missing numbers.

⑥ ( 87, 84, 81, \_\_\_\_\_, \_\_\_\_\_ )

⑦ ( \_\_\_\_\_, \_\_\_\_\_, 21, 26, 31, )

⑧

$$\begin{array}{r} 3,765 \\ 858 \\ 1,597 \\ + 629 \\ \hline \end{array}$$

⑨

$$\begin{array}{r} 4,621 \\ 1,818 \\ 1,239 \\ + 809 \\ \hline \end{array}$$

⑩

$$\begin{array}{r} 4,325 \\ - 2,718 \\ \hline \end{array}$$

⑪

$$\begin{array}{r} 500 \\ - 126 \\ \hline \end{array}$$

⑫

$$\begin{array}{r} 402 \\ - 179 \\ \hline \end{array}$$

⑬

$$\begin{array}{r} 617 \\ - 218 \\ \hline \end{array}$$

⑭

$$\begin{array}{r} 123 \\ \times 8 \\ \hline \end{array}$$

⑮

$$\begin{array}{r} 562 \\ \times 4 \\ \hline \end{array}$$

⑯

$$3 \overline{) 17}$$

⑰

$$2 \overline{) 68}$$

⑱

$$3 \overline{) 90}$$

⑲

$$4 \overline{) 84}$$

20 Circle the denominator.

$$\frac{4}{5}$$

21 Circle the even numbers in the set.

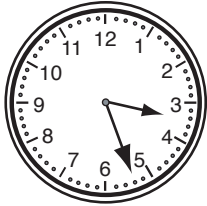
( 23, 68, 74, 35, 56 )

22

$$3 \times Y = 18$$

$$Y =$$

23



It is \_\_\_\_\_ minutes

before \_\_\_\_\_ o'clock.

24

Three pies are cut into sixths. How many pieces will there be?

\_\_\_\_\_

Fill in the missing numbers.

25  $9 = \underline{\quad} + 6$

26  $4 \times \underline{\quad} = 2 \times 6$

27  $5 = \underline{\quad} - 9$

28 Bob has ten crayons. One-half of them are red. How many red crayons does he have?

\_\_\_\_\_

29 Carlos has six pieces of string that are each three feet long. How many feet of string does he have?

\_\_\_\_\_

30 Cameron bought a package of fifteen stickers and divided them evenly among his three sisters. How many stickers did each sister get?

\_\_\_\_\_

31 Sierra had \$8.00. She spent \$2.76 at one store and \$3.82 at another. How much money does she have now?

\_\_\_\_\_



① Fill in the missing numbers. ( \_\_\_\_\_, \_\_\_\_\_, 235, 244, 253, 262 )

② Circle which statements are not true.

$9 - 3 \neq 24 \div 4$

$7 \times 6 > 5 \times 8$

$7 - 2 < 8 \div 2$

③ A parallelogram has \_\_\_\_\_ sides.

④ An octagon has \_\_\_\_\_ sides.

⑤ Select the number from the given set to fill in the blank.  
( 3,234; 3,423; 3,342; 3,243 )

$3,343 < \underline{\hspace{2cm}}$

$$\begin{array}{r} 867 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ \times 49 \\ \hline \end{array}$$

⑧  $15 \overline{)79}$

⑨  $3 \frac{3}{4} - 1 =$

⑩  $2 \frac{1}{8} + 1 \frac{4}{8} =$

⑪ Complete each fraction.

$\frac{3}{9} = \frac{1}{\square}$

$\frac{3}{5} = \frac{\square}{10}$

⑫ Simplify each improper fraction.

$\frac{9}{4} =$

$\frac{11}{9} =$

⑬  $6 \overline{)27}$

⑭  $2 \overline{)76}$

⑮  $4 \overline{)938}$

⑯  $3 \overline{)285}$

⑰ Round to the nearest ten.

43 \_\_\_\_\_

95 \_\_\_\_\_

26 \_\_\_\_\_

⑱  $(6 \times 6) \div 4 = \underline{\hspace{2cm}} + (12 \div 4)$

⑲  $(32 \div 4) \times \underline{\hspace{2cm}} = (42 \div 7) \times 4$

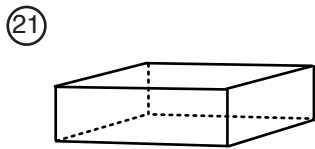
⑳ 6 feet

4 feet

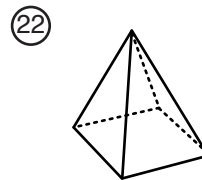


perimeter = \_\_\_\_\_

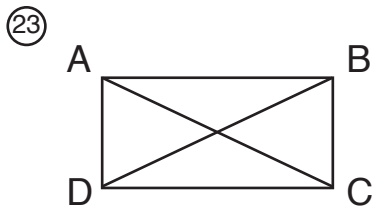
area = \_\_\_\_\_



A rectangular prism has \_\_\_\_\_ faces.



A square pyramid has \_\_\_\_\_ vertices.



Identify a diagonal. \_\_\_\_\_

Identify 2 lines that are parallel. \_\_\_\_\_

Identify 2 lines that are perpendicular. \_\_\_\_\_

㉔ 4 ten thousands, 5 hundreds, 6 ones and 3 hundred thousands

\_\_\_\_\_

three hundred seven thousand, sixty-one

\_\_\_\_\_

㉕ David baked 48 cookies. He gave seven to each of his five friends. How many cookies does he have left?

\_\_\_\_\_

㉖ Patrick had a twenty-dollar bill and a ten-dollar bill. He bought three books that cost \$4.89 each and a pen set that cost \$5.74. How much money does he have left?

\_\_\_\_\_

㉗ Thirteen girls and 17 boys want to go on a class trip. Each car will hold five children. How many cars will they need?

\_\_\_\_\_

①

What is the lowest common multiple of 12 and 9? \_\_\_\_\_

②

$$42.7 + 3.58 =$$

③

$$14 - .8 =$$

④

$$7\frac{8}{9} - 2\frac{5}{6} =$$

⑤

$$2\frac{2}{3} + 1\frac{1}{4} =$$

⑥

An isosceles triangle has \_\_\_\_\_ sides that are congruent.

⑦

$$\frac{3}{4} \times \frac{3}{7} =$$

⑧

4 ones, 3 hundredths,  
7 tenths, 4 thousands,  
5 ten thousands,  
2 thousandths

\_\_\_\_\_

⑨

$$\begin{array}{r} 867 \\ \times 648 \\ \hline \end{array}$$

⑩

$$\begin{array}{r} 479 \\ \times 357 \\ \hline \end{array}$$

⑪

$$24 \overline{) 378}$$

⑫

$$6 \overline{) 2,076}$$

⑬

$$8 \overline{) 1,370}$$

⑭

$$7 \overline{) 966}$$

⑮

Andrew wants to put carpet in a room that is 4 yards wide and 8 yards long. How many square yards of carpet will he need?

\_\_\_\_\_

⑯

A bag holds four pounds of apples. A shipping crate holds six bags. How many pounds of apples will there be in seven crates?

\_\_\_\_\_

⑰ Katelyn has to work 40 hours this week. So far she has worked for eight hours each day for three days and for seven hours on another day. How many more hours does she have to work this week?

\_\_\_\_\_

⑱ Ben had a gardener come to his house and work for five hours at \$8.50 an hour. He also had to buy \$19.87 worth of plants. What was the total amount Ben spent?

\_\_\_\_\_

⑳ Carlos divided 36 books equally among four children. Each child needs to have 11 books. How many more books will Carlos need to get?

\_\_\_\_\_

⑲ On her last four history tests, Ann scored 88, 95, 92 and 89. What was her average score for the four tests?

\_\_\_\_\_

㉑ Shirley has nine fewer stickers than Abby. Abby has seven more stickers than Cary. Cary has 28 stickers. How many stickers does Shirley have?

\_\_\_\_\_

㉒ Brian is putting eight stamps on each page in a book. If he has 43 stamps, how many pages will be completely filled?

\_\_\_\_\_

㉓ There are four cities on a map. Cole is east of Rock Point. Cole is west of Sanders. Mill Town is between Cole and Rock Point. Which city is the most eastern?

\_\_\_\_\_

㉔ Ryan worked three more hours than Cameron. They worked a total of 15 hours. How many hours did each boy work?

\_\_\_\_\_