

# Moving with Math® Math by Topic Placement Test

## About this test...

This test is divided into 4 parts that test skills appropriate for Level A, Level B, Level C, and Level D of the Math by Topic series. After experience with the test, you may want to adapt some directions for your particular situation.

This placement test does not cover all skills students need for success in each level. It is intended as a guide to place students in their correct success level.

*Teachers may interpret results in conjunction with other measures of student achievement.*

## Begin by having students take the test for Level A (Part I).

### Testing Level A Skills (Part I)

Level A skills are those that students typically learn in Grades 1 or 2. The test is further divided into subsections for the topics covered in each of the three Level A books. If a student achieves a score of 70% or higher on a subsection, then that student has probably mastered that topic and does not need to learn the skills taught in the related book.

<u>Subsection</u>	<u>Recommendation</u>
Questions 1-5	If 4 or more are answered correctly, skip AI (Numeration)
Questions 6-17	If 9 or more are answered correctly, skip AII (Addition/Subtraction)
Questions 18-22	If 4 or more are answered correctly, skip AIII (Fractions, Geometry, Measurement)

If a student gets more than 16 questions correct in Part I of the test, he or she is probably ready to learn the skills taught in Level B. Have the student complete Part II of the test, then follow the "Testing Level B Skills" instructions.

### Testing Level B Skills (Part II)

Level B skills are those that students typically learn in Grades 3 or 4. The test is further divided into subsections for the topics covered in each of the three Level B books. If a student achieves a score of 70% or higher on a subsection, then that student has probably mastered that topic and does not need to learn the skills taught in the related book.

<u>Subsection</u>	<u>Recommendation</u>
Questions 1-7	If 5 or more are answered correctly, skip BI (Numeration, Addition, Subtraction)
Questions 8-16	If 7 or more are answered correctly, skip BII (Multiplication & Division)
Questions 17-22	If 4 or more are answered correctly, skip BIII (Fractions, Geometry, Meas.)

If a student gets more than 16 questions correct in Part II of the test, he or she is probably ready to learn the skills taught in Level C. Have the student complete Part III of the test, then follow the "Testing Level C skills" instructions.

# ***Moving with Math® Math by Topic Placement Test***

## **Testing Level C Skills (Part III)**

Level C skills are those that students typically learn in Grades 5 or 6. The test is further divided into subsections for the topics covered in each of the three Level C books. If a student achieves a score of 70% or higher on a subsection, then that student has probably mastered that topic and does not need to learn the skills taught in the related book.

<b><u>Subsection</u></b>	<b><u>Recommendation</u></b>
Questions 1-5	If 4 or more are answered correctly, skip CI (Numeration)
Questions 6-17	If 9 or more are answered correctly, skip CII (Fractions, Decimals, Percent)
Questions 18-22	If 4 or more are answered correctly, skip CIII (Geometry, Measurement)

If a student gets more than 16 questions correct in Part III of the test, he or she is probably ready to learn the skills taught in Level D. Have the student complete Part IV of the test, then follow the "Testing Level D Skills" instructions.

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## **Testing Level D Skills (Part IV)**

Level D skills are those that students typically learn in Grades 7 or 8. The test is further divided into subsections for the topics covered in each of the five Level D books. If a student achieves a score of 70% or higher on a subsection, then that student has probably mastered that topic and does not need to learn the skills taught in the related book.

<b><u>Subsection</u></b>	<b><u>Recommendation</u></b>
Questions 1-5	If 4 or more are answered correctly, skip DI (Numeration)
Questions 6-12	If 5 or more are answered correctly, skip DII (Fractions & Decimals)
Questions 13-15	If all 3 are answered correctly, skip DIII (Percent)
Questions 16-22	If 5 or more are answered correctly, skip DIV (Geometry, Measurement)
Questions 23-25	If all 3 are answered correctly, skip DV (Algebra)

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# Placement Test Answer Key

If a student misses one part of a problem, count the entire problem as incorrect. Units at the end of an answer are not necessary to get a problem correct.

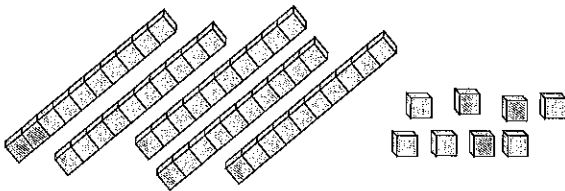
Part I	Part II	Part III	Part IV
1. >	1. 12	1. 7,400	1. (A)
2. 58	2. 5	2. 24,111	2. 8,000,000
3. 58, 59, 60, 61, 62	3. 270	3. 302	3. (B)
4. F	4. 932	4. 69 inches	4. 29,172
5. O (a circle)	5. 82,149	5. 900	5. (A)
6. 9, 10	6. 286	6. $\frac{2}{5}$	6. $\frac{1}{15}$
7. 4, 6	7. 8,876	7. $\frac{14}{3}$	7. $1\frac{3}{5}$
8. 13, 13	8. 42, 72	8. $\frac{3}{4}$	8. thousandths
9. 9, 8	9. 735	9. $3\frac{3}{5}$	9. 0.67
10. 58	10. 2,496	10. $\frac{11}{12}$	10. 0.3
11. 83	11. (C)	11. $\frac{8}{15}$	11. 4.3
12. 23	12. 8, 6	12. 0.7	12. 14¢
13. 26	13. 14 r1	13. >	13. $\frac{7}{10}$
14. 8	14. 326	14. 0.59	14. (C)
15. 4	15. 48	15. 0.0672	15. 6.3
16. 3	16. 5	16. 25%	16. (C)
17. 30, 40, 50, 60, 70, 80, 90	17. $\frac{5}{11}$	17. 12¢	17. $\overline{FE}$
18. (D)	18. $\frac{4}{5}$	18. (D)	18. 130
19. $\frac{1}{4}$	19. (B)	19. 25	19. 1:15
20. 8¢	20. (C)	20. 12	20. 10 ft. 2 in.
21. 4:30	21. 18	21. 4000	21. 31.4 feet
22. 2 inches	22. 2	22. 105	22. 33 miles
			23. 35°
			24. (-3, 3)
			25. 5

## Part 1

1. Put the correct symbol ( $>$ ,  $<$ ,  $=$ ) in the box.

$$9 \quad \square \quad 3$$

2. Write the number that matches this picture.



3. Write the five numbers that come just after 57.

\_\_\_\_\_

4. Write the letter that is sixth from the star.



**A B C D E F G H I J**

5. Draw the shape that comes next in the pattern.



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

$$3 + 7 = \underline{\quad}$$

$$\begin{array}{r} 7 \\ - 3 \\ \hline \end{array}$$

$$8 - 2 = \underline{\quad}$$

$$\begin{array}{r} 6 \\ + 7 \\ \hline \end{array}$$

$$8 + 5 = \underline{\quad}$$

$$\begin{array}{r} 16 \\ - 7 \\ \hline \end{array}$$

$$17 - 9 = \underline{\quad}$$

$$\begin{array}{r} 35 \\ + 23 \\ \hline \end{array}$$

$$\begin{array}{r} 46 \\ + 37 \\ \hline \end{array}$$

$$\begin{array}{r} 57 \\ - 34 \\ \hline \end{array}$$

$$\begin{array}{r} 65 \\ - 39 \\ \hline \end{array}$$

14. Three



joined five

How many were there in all? \_\_\_\_\_

15. You have 6

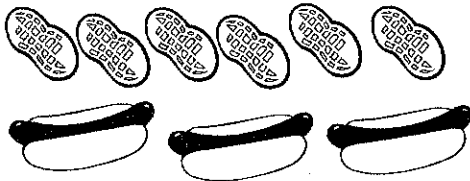


You eat 2



How many are left? \_\_\_\_\_

16. How many more peanuts than hot dogs?







17. Skip count by 10's.

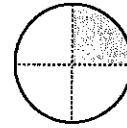
10, 20, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 100.

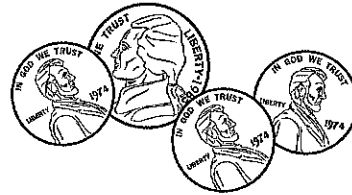
18. Which figure is a square? \_\_\_\_\_

(A)  (B)  (C)  (D) 

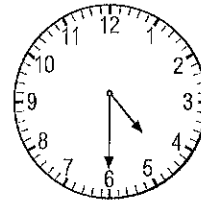
19. What fraction is shaded? \_\_\_\_\_



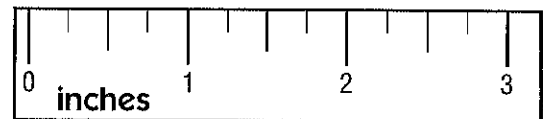
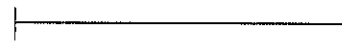
20. How much money? \_\_\_\_\_



21. What time is it? \_\_\_\_\_



22. How long is the line to the nearest inch? \_\_\_\_\_



Part 1 is  
complete.

## Part II

1. What number goes in the box? \_\_\_\_\_

4, 8, , 16, 20

2. What digit is in the ten thousands' place in 857,412? \_\_\_\_\_

3. Round 265 to the nearest ten. \_\_\_\_\_

4. 
$$\begin{array}{r} 347 \\ + 585 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 49,364 \\ + 32,785 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 643 \\ - 357 \\ \hline \end{array}$$

7.  $8943 - 67 =$  \_\_\_\_\_

8. 
$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$
  $8 \times 9 =$  \_\_\_\_\_

9. 
$$\begin{array}{r} 245 \\ \times 3 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 52 \\ \times 48 \\ \hline \end{array}$$

11. Which shows the product of 8 and 4? \_\_\_\_\_

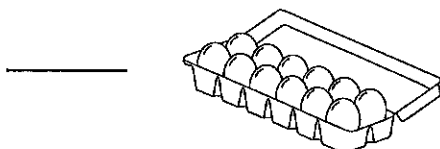
- (a)  $8 + 4$
- (b)  $8 - 4$
- (c)  $8 \times 4$
- (d)  $8 \div 4$

12.  $6 \overline{)48}$   $54 \div 9 =$  \_\_\_\_\_

13.  $3 \overline{)43}$

14.  $6 \overline{)1956}$

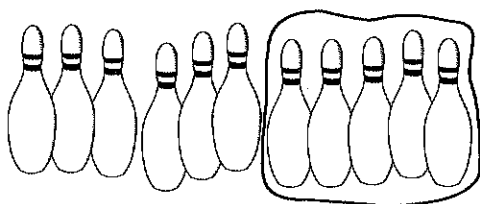
15. There are 12 eggs in a dozen.  
How many eggs are there in 4 dozen?



16. There are 6 crayons in a box. How many boxes will be needed to hold 30 crayons?

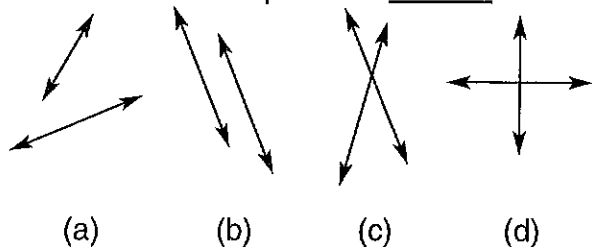


17. What fraction of the set is circled?

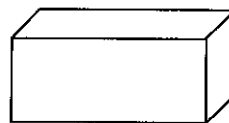


18.  $\frac{3}{5} + \frac{1}{5} =$  \_\_\_\_\_

19. Which lines are parallel? \_\_\_\_\_

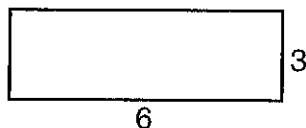


20. What is the name of the figure? \_\_\_\_\_



- (a) cone (b) cylinder  
(c) rectangular solid (d) sphere

21. What is the perimeter of this rectangle?



22. How many more hours are spent watching sitcoms than sports?

Average Weekly TV Viewing	
News	* *
Sitcoms	* * * * *
Sports	* * * *
* = 1 hour of viewing TV	



Part 2 is complete.

## Part III

1. Round 7,365 to the nearest hundred.

\_\_\_\_\_

2. 
$$\begin{array}{r} 423 \\ \times 57 \\ \hline \end{array}$$

3.  $6 \overline{)1812}$

4. The heights of five people on the basketball team are 74, 64, 69, 71 and 67 inches. What is the average height?

\_\_\_\_\_

5. Estimate by rounding to the nearest hundred.

$384 + 517$  is about \_\_\_\_\_

6. Simplify  $\frac{10}{25}$ . \_\_\_\_\_

7. Change  $4\frac{2}{3}$  to an improper fraction.

\_\_\_\_\_

8. Add and simplify  $\frac{1}{8} + \frac{5}{8} =$  \_\_\_\_\_

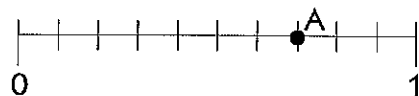
9. Subtract.

$$\begin{array}{r} 6\frac{1}{5} \\ - 2\frac{3}{5} \\ \hline \end{array}$$

10. 
$$\begin{array}{r} \frac{2}{3} \\ + \frac{1}{4} \\ \hline \end{array}$$

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

12. What decimal is shown at Point A on the number line?



13. What symbol ( $>$ ,  $<$ ,  $=$ ) goes in the box to show how the numbers compare?

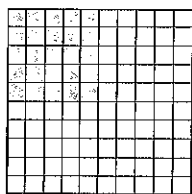
$.23 \square .20$

14. 
$$\begin{array}{r} 0.24 \\ + 0.35 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} .21 \\ \times .32 \\ \hline \end{array}$$

16. What percent of the square is shaded?

\_\_\_\_\_

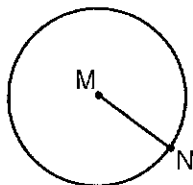


17. If 8 ounces of cream cost \$.96, what is the unit price for 1 ounce?

\_\_\_\_\_

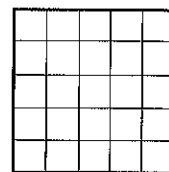
18. MN is what part of the circle? \_\_\_\_\_

- (a) center
- (b) circumference
- (c) diameter
- (d) radius



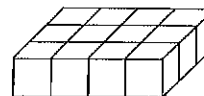
19. If  $\square = 1$  square unit, the area of the figure below is how many square units?

\_\_\_\_\_ sq. units



20. If  $\square = 1$  cubic unit, the area of the figure below is how many cubic units?

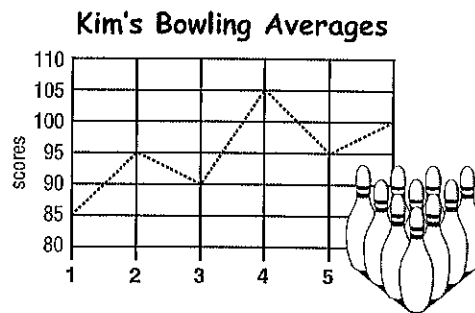
\_\_\_\_\_ cubic units



21. 4 grams = \_\_\_\_\_ milligrams

1 gram = 1000 milligrams

22. What was Kim's bowling average on week 4? \_\_\_\_\_



Part 3 is complete.

## Part IV

1. Which of the following gives the prime factors of 18? \_\_\_\_\_

(a)  $2 \cdot 3 \cdot 3$   
 (b)  $2 \cdot 9$   
 (c)  $2 \cdot 2 \cdot 3$   
 (d)  $2 \cdot 3$

2. Round 7,615,480 to the nearest million.  
 \_\_\_\_\_

3. Which of the following is not true?

(a)  $2^3 = 2 \cdot 2 \cdot 2$   
 (b)  $4^3 = 4 \cdot 3$   
 (c)  $10^2 = 10 \cdot 10$   
 (d)  $5^3 = 5 \cdot 5 \cdot 5$

4. 
$$\begin{array}{r} 748 \\ \times 39 \\ \hline \end{array}$$

5. Which of the following is not a reasonable estimate?  
 \_\_\_\_\_

(a)  $562 + 312 \approx 600$   
 (b)  $9178 - 3904 \approx 5000$   
 (c)  $382 + 594 \approx 1000$   
 (d)  $794 - 386 \approx 400$

6. Multiply and simplify.

$$\frac{2}{5} \times \frac{1}{6} = \underline{\hspace{2cm}}$$

7. Find the quotient in lowest terms.

$$\frac{4}{5} \div \frac{1}{2} = \underline{\hspace{2cm}}$$

8. What is the place name of the 2 in the number in the box?  
 \_\_\_\_\_

0.5728
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9. Round 0.673 to the nearest hundredth.  
 \_\_\_\_\_

10. Write  $\frac{3}{10}$  as a decimal. \_\_\_\_\_

11.  $0.5 \overline{)2.15}$

12. A large sack of dog food weighs 20 lbs. and costs \$2.80. What is the cost per pound?  
 \_\_\_\_\_

13. Change 70% to a fraction in lowest terms.  
 \_\_\_\_\_

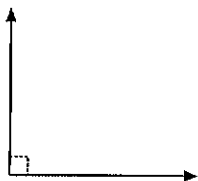
14. Which of the following is not a proportion?  
 \_\_\_\_\_

(a)  $\frac{2}{2} = \frac{6}{6}$   
 (b)  $\frac{3}{6} = \frac{4}{8}$   
 (c)  $\frac{2}{3} = \frac{4}{5}$   
 (d)  $\frac{9}{12} = \frac{3}{4}$   
 (e) none of the above

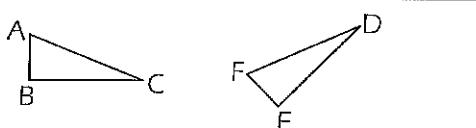
15. 18% of 35 = \_\_\_\_\_

16. The name of the angle shown is \_\_\_\_\_

- (a) acute
- (b) obtuse
- (c) right
- (d) straight

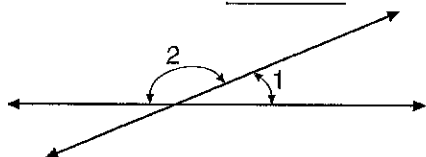


17. The two figures are congruent. What part corresponds to  $\overline{AB}$ ?

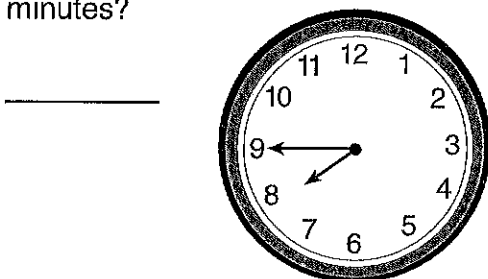


18. The measure of  $\angle 1$  is  $50^\circ$

The measure of  $\angle 2$  is \_\_\_\_\_ $^\circ$



19. What time will it be in 5 hours and 30 minutes?

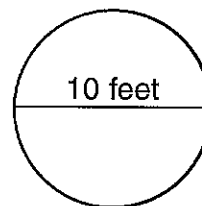


20. Add. Regroup when necessary.

$$\begin{array}{r} 7 \text{ ft.} \quad 8 \text{ in.} \\ + 2 \text{ ft.} \quad 6 \text{ in.} \\ \hline \end{array}$$

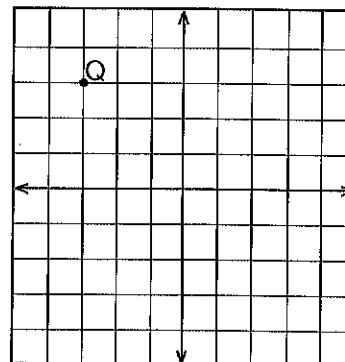
21. A car travels 11 miles in 20 minutes. At that rate, how far would the car go in 60 minutes?

22. The circumference of a circle is found by multiplying the diameter times  $\pi$ . ( $C = \pi d$ )  
If  $\pi \approx 3.14$ , what is the circumference of the circle in feet?



23. The temperature readings were  $-15^\circ$  at midnight and  $20^\circ$  at noon. How many degrees warmer was the temperature at noon?

24. The coordinates of Q are (\_\_\_\_, \_\_\_\_)



25. What is the value of  $x$  in the equation in the box?

$2x + 3 = 13$



Part 4 is complete.