



HEED Middle School Math Placement Test

Student's Name: _____ Date of Birth: _____

Phone Number: _____

Student Email: _____ Parent Email: _____

Current Math Curriculum: _____

Student is entering _____ Grade in the upcoming fall semester.

Dear Parents,

The purpose of this test is to determine what your child already knows so that we can place him or her in the proper class. **Allow the student to work without your assistance until they cannot complete any more problems.**

Parents are required to proctor the test. (The student must be in the same room with the parent while the test is completed.)

Please impress upon your student the importance of carefully reading each question. Also please remind your student that this test should be an example of his best work. It should be as neat and complete as possible.

Please be sure to follow these directions:

- Please do not assist your child at all
- Take the exam in one sitting
- Calculators are only permitted for Geometry and Algebra 2. The use of cell phones and computers are strictly forbidden.
- Do all work NEATLY on a separate piece of paper. It will take several pages to complete the test. It is better to use many pages and be neat and accurate.
- SHOW all of your work so we can attempt to discern if incorrect answers are due to computational errors or comprehension issues.
- If you can't complete a problem do as many steps as you can to show your work.
- Number each problem and circle each answer.
- Once completed, scan this cover sheet and your work, and email a copy of the scanned pdf document to: thaliasteffen@takeheed.org

She will review the placement test as quickly as possible and then email you the results. She will do her best to let you know if your student is already prepared for the HEED class in the fall or if there is some preparation that must be done prior to taking the class.

This test was proctored by the parent whose name and signature appear below:

Parent's Printed Name

Parent's Signature

Show Your Work!

Math 5/4

1. Mae-Ying bought a package of paper priced at \$1.98 and 2 pens priced at \$0.49 each. The tax on the entire purchase was 18¢. What was the total cost of the items?
2. Seventy-five beans were equally divided into five pots. How many beans were in each pot?
3. Robo could run 7 miles in 1 hour. At that rate, how many miles could Robo run in 3 hours?
4. At 11:45 A.M. Jason glanced at the clock. His doctor's appointment was in $2\frac{1}{2}$ hours. At what time was his appointment?
5. Find the sixth number in this counting sequence: 7, 14, 21, ...

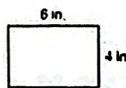
6. Write the number of shaded rectangles shown as a mixed number.



7. Twenty-five percent of this square is shaded. What percent of the square is not shaded?



8. What is the perimeter of this rectangle?



9. A square has one side that is 7 inches long. What is the area of the square?

10. To what number is the arrow pointing?



11. $4.2 + 3.5 + 0.25 + 4.0$

$$\begin{array}{r} 12. \quad 460 \\ \times \quad 9 \\ \hline \end{array}$$

$$13. \quad 6 \overline{)3795}$$

$$14. \quad 6 \times 4 \times 10$$

$$15. \quad \begin{array}{r} \$4.86 \\ + \$2.95 \\ \hline \end{array}$$

Find each missing number for 16–17:

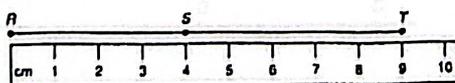
$$16. \quad \begin{array}{r} z \\ + 179 \\ \hline 496 \end{array}$$

$$17. \quad \begin{array}{r} 67 \\ - B \\ \hline 16 \end{array}$$

18. Use digits to write the number three hundred forty-three.

19. Which digit in 6.125 is in the hundredths place?

20. What is the length of \overline{ST} ?



21. In 2 hours the 3 boys picked a total of 1347 cherries. If they share the cherries evenly, then each boy will get how many cherries?

22. After paying \$7.50 for a movie ticket, Salvador still had \$3.75. How much money did Salvador have before paying for a ticket?

23. When three new members joined the club, the number of members increased to 28. How many members were in the club before the new members arrived?

24. Adriana's age is $\frac{3}{7}$ of her dad's age. If her dad is 36 years old, how old is Adriana?

25. Estimate the sum of 672 and 830 by rounding to the nearest hundred before adding.

26. Use digits to write eight hundred eighteen thousand, eighty.

27. \$2.54

5.36

+ 0.75

$$\begin{array}{r} 4287 \\ \times 5 \\ \hline \end{array}$$

31. 41,026

- 39,543

33. \$10 - (\$5.80 + 28¢)

34. $1\frac{2}{3} + 1\frac{1}{3}$

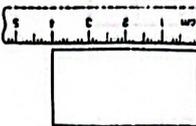
35. $\frac{25}{7} = \frac{\square}{100}$

36. Half of 100 is 50, and half of 50 is 25. What number is half of 25?

37. A stop sign is the shape of an octagon. An octagon has how many sides?

38. What are the next three terms in this counting sequence? ... , 2700, 2800, 2900, ...

39. This rectangle is half as wide as it is long. What is the perimeter of the rectangle?



40. The length of segment AC is 78 millimeters. If BC is 29 millimeters, then what is the length of segment AB?



41. Which digit is in the hundred-thousands place in the number 987,654,321?

42. Write the number twenty-one and five hundredths.

43. In an auditorium there are 25 rows with 18 chairs in each row. How many chairs are in the auditorium?

44. The average pumpkin weighs 6 pounds. The prize-winning pumpkin weighs 324 pounds. The prize-winning pumpkin weighs as much as how many average pumpkins?

45. What is the total price of a \$45.79 item when 7% sales tax is added?

46. How many quarter-pound hamburgers can be made from 100 pounds of ground beef?

47. There were 13 original states. There are now 50 states. What fraction of the states are the original states?

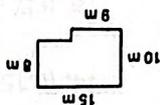
48. $\frac{3}{8} \cdot \frac{1}{3}$ 49. 3.7×0.25

50. 5×0.8 51. $2\frac{1}{2} + 1\frac{1}{6}$

52. $\frac{4}{3} \div 1\frac{1}{2}$ 53. $2^3 + \sqrt{25} \times 3 - 4^2 \div \sqrt{4}$

54. What is the average of 4.2, 2.61, and 3.6?

55. The area of a square is 64 cm². What is the perimeter of the square?



56. What is the area of this polygon?

57. $26.9 + 12 + w = 49.25$ Find w .

58. If $d = r$, and if $r = 60$ and $t = 4$, what does d equal?

Complete the table for 59–60.

60.		1.25	125%
59.	$\frac{8}{5}$	0.625	
	Fraction	Decimal	Percent

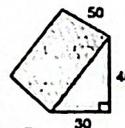
Math 8/7

61. Round 7.49362 to the nearest thousandth.
62. President Franklin D. Roosevelt died in office in 1945 at the age of 63. In what year was he born?
63. Eric ran 8 laps in 11 minutes 44 seconds. How many seconds did it take Eric to run 8 laps?
64. A one-quart container of oil costs 89¢. A case of 12 one-quart containers costs \$8.64. How much is saved per container by buying the oil by the case?
65. Ricardo ran the 400-meter race 3 times. His fastest time was 54.3 seconds. His slowest time was 56.1 seconds. If his average time was 55.0 seconds, what was his time for the third race?
66. The perimeter of a square is one yard. What is the area of the square in square inches?

67. The perimeter of the square equals the perimeter of the regular pentagon. Each side of the pentagon is 16 cm long. How long is each side of the square?



68. Find the volume of the triangular prism shown. Dimensions are in millimeters.



69. The sale price of an item on sale for 40% off is \$48. What was the regular price?
70. A bag contains 3 red marbles, 4 white marbles, and 5 blue marbles. If one marble is drawn from the bag, what is the probability that the marble will be blue?
71. $6w = 6^3$ Find w .
72. $4\frac{4}{5} \cdot 1\frac{1}{9} \cdot 1\frac{7}{8}$
73. $3\frac{5}{6} - (\frac{2}{3} - \frac{1}{2})$
74. $(0.15)(0.05)$
75. $\frac{1.2}{4.4} = \frac{3}{a}$ Find a .
76. If $\frac{w}{x} = 3$, what does $\frac{x}{w}$ equal?
77. Write a fraction equal to $\frac{1}{2}$ with a denominator of 6 and a fraction equal to $\frac{1}{3}$ with a denominator of 6. Then add the fractions.
78. Evaluate $x^3 - xy - \frac{x}{y}$ if $x = 2$ and $y = 0.5$
79. Forty percent of what number is 60?
80. Only three-tenths of the print area of the newspaper carried news. The rest of the area was filled with advertisements. What percent of the print area was filled with advertisements?