Math 8 **Application 15** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Show all your work!

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| 1. Circle the letter that represents the approximate location on the number line of .  A B C D    0 5 10 15 | 2. Simplify without a negative exponent:  7-3 = | 3. Solve for x:  x3 = 343 |
| 4. Write in scientific notation.  985,000 | 5. Write the difference in scientific notation.  (9.3 ∙ 105) - (3.5 ∙ 105) = | 6. Solve for x.  8x – 21 = 12x + 10 |
| 7. What type of transformation of Figure A resulted in Figure B?  A B | 8. Find the length of side *a* below.  5 in. 10 in.  *a* | 9. Find the measure of angle b.    b  63◦ |
| 10. Put the following numbers in order from smallest to largest.  200%, 2%, 2.5, 2 | 11. Estimate the sum below.    98,580 + 875,560 | 12. Write as percent.  1.8 |
| 13. Mark made a pattern with toothpicks as shown below. Write an equation for the function.    Stage 1 Stage 2 Stage 3 | 14. Graph Mark’s function.  http://maaw.info/images/BlankGraph.gif | 15. Complete the table.   |  |  | | --- | --- | | Stage | Total toothpicks | | 1 |  | | 2 |  | | 3 |  | | 5 |  | | 10 |  | |
| 16. What is the sale price of a pair of $45 jeans that is marked 40% off? | 17. What is the volume of a sphere with a diameter of 8 m? | 18. Sam ran 26 miles in 3.5 hours. What was his rate in miles per hour? |
| 19. Juan’s quiz scores are 5, 12, 8, 7, 10, and 9. What is the median of his quizzes? | 20. A high jumper cleared the bar at 6 ft. 8 in. on her first jump, 6 ft. 11 in. on her second jump, and 7 ft. 2 in. on her third jump. What was the total of her jumps? | ***Number correct***  5 minutes\_\_\_\_\_\_\_  Total\_\_\_\_\_\_\_\_\_\_\_ |