Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **UNIT 3 TEST REVIEW**

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| Use the following to review for you test. Work the Practice Problems on a separate sheet of paper. | | | |
| **Topic** | **Things to remember** | **Examples** | |
| **A. Perform a dilation with a given scale factor** | When the center of dilation is the origin, you can multiply each coordinate of the original figure, or pre- image, by the scale factor to find the coordinates of the dilated figure, or image. | 1. Dilate with k = ½. | 2. Dilate with k = 2. |
| **B. Find the missing side for similar figures.** | Set up a proportion by matching up the corresponding sides. Then, solve for x. | 3. | 4. |
| 5. | 6. |
| **C. Determine if 2 triangles are similar, and write the similarity statement.** | Remember the 3 ways that you can do this: AA, SAS, SSS | 7. ΔGNK ~ \_\_\_\_\_\_ by\_\_\_\_\_\_ | 8. ΔABC ~ \_\_\_\_\_\_ by\_\_\_\_\_\_ |
| **D. Find sin, cos, and tan ratios** | Just find the fraction  using SOHCAHTOA |  | **9.** Find sin A. |
| **10.** Find tan B. |
| **11.** Find cos B. |
| **12.** Find tan A. |
| **E. Know the relationship between the ratios for complementary angles.** |  | **13.** Given Right ΔABC and , find . | |
| **F. Use trig to find a missing side measure** | Set up the ratio and then use your calculator.  If the variable is on the top, multiply.  If the variable is on the bottom, divide. | **14.** Find f.  25°  7  **f** | **15.** Find m.  43  **m**  85° |
| **G. Use trig to find a missing angle measure** | Tap the trig button twice to get the INVERSE then type in the ratio. | **16.** Find p.    **p°**  13  40 | **17.** Find s.  **s°**  32  17 |
| **H. Trig Word Problems** | Draw the picture. Label the sides.  Set up the ratio, and solve. | **18.** From 25 feet away from the base of a building, the angle of elevation from the ground to the top of a building is measured to be 38°. How tall is the building? | |
| **19.** A kite is 35 feet in the air and the string forms an angle of 62° with the ground. How long is the string? | |
| **20.** Lucy, whose eye level is 4 feet from the ground, stands 10 feet away from the base of a tree. From her line of sight, she is looking at an angle of elevation of 40° to the top of the tree. How tall is the tree? | |