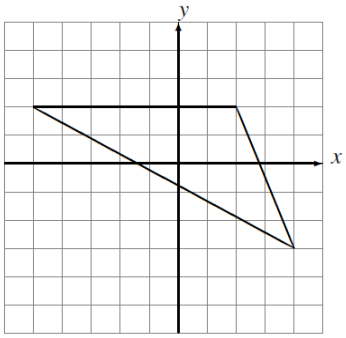
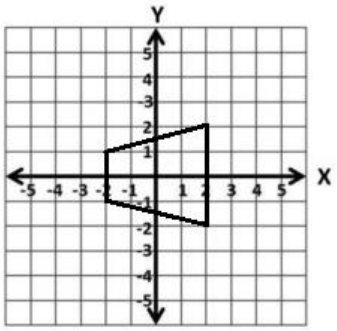
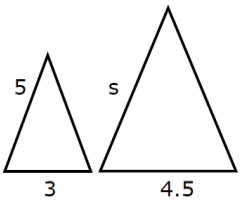
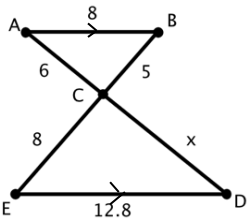
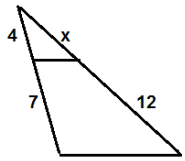
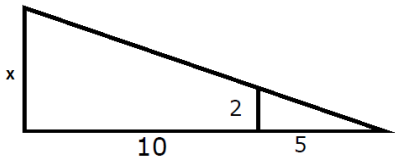
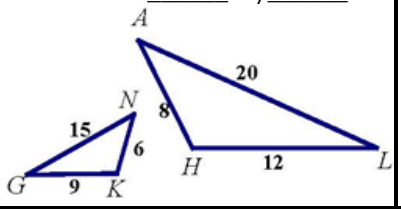
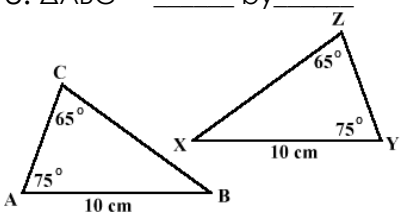
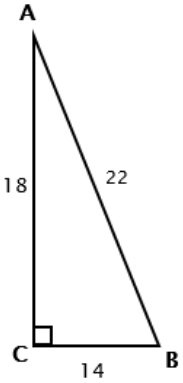
Name _____ Date _____

UNIT 3 TEST REVIEW

Use the following to review for you test. Work the Practice Problems on a separate sheet of paper.

<table>
<tr><th>Topic</th><th>Things to remember</th><th colspan="2">Examples</th></tr>
<tr><td>A. Perform a dilation with a given scale factor</td><td>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.</td><td>1. Dilate with k = ½.
  </td><td>2. Dilate with k = 2.
  </td></tr>
<tr><td rowspan="2">B. Find the missing side for similar figures.</td><td rowspan="2">Set up a proportion by matching up the corresponding sides. Then, solve for x.</td><td>3.
  </td><td>4.
  </td></tr>
<tr><td>5.
  </td><td>6.
  </td></tr>
<tr><td>C. Determine if 2 triangles are similar, and write the similarity statement.</td><td>Remember the 3 ways that you can do this: AA, SAS, SSS</td><td>7. ΔGNK ~ _____ by_____
  </td><td>8. ΔABC ~ _____ by_____
  </td></tr>
<tr><td>D. Find sin, cos, and tan ratios</td><td>Just find the fraction using SOHCAHTOA</td><td>  </td><td>9. Find sin A.

10. Find tan B.

11. Find cos B.

12. Find tan A.</td></tr>
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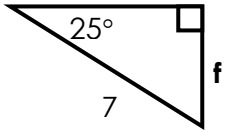
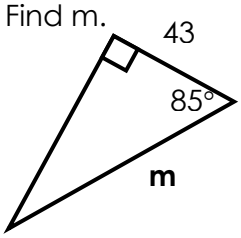
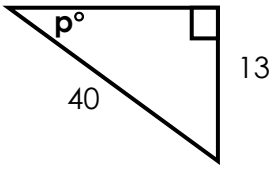
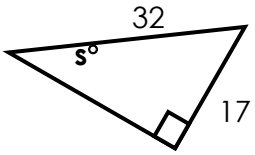
<tr><td>E. Know the relationship between the ratios for complementary angles.</td><td>$\sin\theta = \cos(90-\theta)$
$\cos\theta = \sin(90-\theta)$
$\tan\theta = \frac{1}{\tan(90-\theta)}$</td><td colspan="2">13. Given Right ΔABC and $\sin\theta = 5/13$, find $\sin(90-\theta)$ and $\cos(90-\theta)$.</td></tr>
<tr><td>F. Use trig to find a missing side measure</td><td>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.</td><td>14. Find f.
 
</td><td>15. Find m.
 
</td></tr>
<tr><td>G. Use trig to find a missing angle measure</td><td>Tap the trig button twice to get the INVERSE then type in the ratio.</td><td>16. Find p.
 
</td><td>17. Find s.
 
</td></tr>
<tr><td rowspan="3">H. Trig Word Problems</td><td rowspan="3">Draw the picture.
Label the sides.
Set up the ratio, and solve.</td><td colspan="2">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?</td></tr>
<tr><td colspan="2">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?</td></tr>
<tr><td colspan="2">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?</td></tr>
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