**R3-1** Trig Review Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block:\_\_\_\_\_\_\_\_\_\_\_

**Right Triangle Trigonometry Review**

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| **What you need to know & be able to do** | **Things to Remember** | **Examples** |
| Find the sine, cosine, and tangent ratios.“Write the Fraction” | $$sin=\frac{opposite}{hypotenuse}$$$$cos=\frac{adjacent}{hypotenuse}$$$$tan=\frac{opposite}{adjacent}$$**S**OH**C**AH**T**OA | 1. Find sine, cosine, and tangent of angle Z.  | 2. Find the sine, cosine, and tangent of angle A. (hint: Pyth. Th.) |
| Find the trigonometric ratios of similar triangles. |  | 3. If  , then what is the length of   |
| Identify the relationship between the sine and cosine of complementary angles. |  | 4. The cosine of an acute angle is $\frac{1}{2}$, what is the sine of its complementary angle? | 5. Which of the following is true?a) $\sin(30°=\cos(30°))$b) $\sin(30°=\cos(60°))$c) $\sin(30°=\sin(60°))$d) $\tan(30°=\cos(60°))$ |
| Use sine, cosine, and tangent to find a missing side length. |  | 6. Find the value of f. **f**3221° | 7. Find the value of g.17**g**42° |
| Use sine, cosine, and tangent to find a missing angle. |  | 8. Find the value of b. **b°**3 25 | 9. Find the value of e.13 **e°**19 |
| Solve word problems using sine, cosine, and tangent. | Draw a picture, then try to solve!! | 10.$ $ A forest ranger in a 90-foot observation tower sees a fire. The angle of depression to the fire is 7°. What is the horizontal distance between the tower and the fire? Round to the nearest foot. |
| 11. When the angle of elevation to the sun is 37°, a flagpole casts a shadow that is 24.2 ft long. What is the height of the flagpole to the nearest foot? |
| 12. A ramp has an angle of elevation of $28°$ and is 14 feet long. To the nearest tenth, what is the vertical height of the ramp? |
| 13. Ben is looking up at a water tower. The angle of elevation from the ground to the top of the tower is 30 degrees. Ben is standing 8 ft from the base of the towe. How tall is the tower? Round to the nearest tenth. |