Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per \_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_

**Intermediate II Chapter 7 Review**

**You MUST show ALL of your work for full credit**

|  |
| --- |
| **7.1 Congruence and Transformations** |
| 1. Determine whether to figures are congurent using transfromations. Explain your reasoning. Image result for Congruent | 2. Determine whether triangle BAC and QPR are congurent using transfromations. Explain your reasoning. Image result for Congruent triangles |
| Image result for Congruent triangles**7.2 Congruence**Use the two triangles at right to answer 4-6 |
| 4. Write 3 congurence staments comparing congruent parts of the triangles shown. | 5. In the quilt design shown, PQR $≅$ JKL. $∠KJL=33°$ and $∠JKL=73°$ What is the measure of $∠PQR?$  | 6. Refer to the figure from question 5. Assume $∠QPR$ is a right angle. Find the measure of $∠JLK$. |
| **7.3 Similarity and Transformations** |
| 7. Determine whether the two figures are similar using transformations. Explain your reasoning. Image result for similar triangles | 8. Jenna would like to copy a massive picture that is 4 feet by 6 feet. She enlarges it by a factor of 1:1/4. Then shrinks it by a factor of 3:1. What are the dimensions of the new picture? **Are the pictures similar?** |

|  |
| --- |
| **7.4/7.5 Similar Polygons** |
| 9. The pair of polygons are similar. Write a proportion. Then solve for the length of the missing side.Image result for proportion squares find missing side | 10. A projector’s image measures 6 inches wide by 8 inches tall. The width of the actual chip is 3 millimeters. How long is the chip? | 11. What is the length of AD?Image result for proportion squares find missing side |

|  |
| --- |
| **7.6 Slope and Similar Triangles** |
| 12. Find the slope between the two points. (-2, 8) and (-4, 5) | 13. Find the slope of the line |
| 14. Graph each pair of similar triangles. Then write a proportion comparing the rise to the run for each of the similar slope triangles and find the numeric value. |

**Intermediate II
Chapter 8 Review**

**Lesson 8.1: Volume of a Cylinder:**

**Volume of a Cylinder (2 congruent circular bases): V = Bh where B = the area of the base (Base area =** $πr^{2}$**)
 V =** $πr^{2}h$

|  |  |  |
| --- | --- | --- |
|  | 2. | 3. |
|  |  | Find the volume of a cylinder whose diameter is 15 centimeters and whose height is 10 centimeters. |
| 4. Find the volume of the outer cylinder if the inner cylinder is hollow. |

**Lesson 8.2: Volume of a Cone:**

**Volume of a Cone (1 circular base and 1 vertex): V =** $\frac{Bh}{3}$ **where B = the area of the base (Base area =** $πr^{2}$**)
 V =** $\frac{πr^{2}h}{3}$

|  |  |  |
| --- | --- | --- |
| 1. | 2. | 3.If the volume of a cone is 366.3 cubic inches, find the height of the cone. |

**Lesson 8.3: Volume of a Sphere:**

**Volume of a Sphere (Ball): V =** $\frac{4πr^{3}}{3}$ **Volume of a Hemisphere (half): V =** $\frac{\frac{4πr^{3}}{3}}{2}$

|  |  |  |
| --- | --- | --- |
| 1. | 2. | 3.Mary is filling a hemispherical punch bowl for a birthday party. The diameter of the punch bowl is 18 inches. How much punch will the punch bowl hold?How many 16 cubic inch cup servings will the punch bowl serve? |

**Extra: Volume of Composite Figures:**

**Composite Solids: Rules:**
1. Always use 3.14 for Pi.
2. Round to the tenths place at the end of each shape.
3. Add the composite shapes together.

|  |  |
| --- | --- |
| 1. | 2.  |