Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_\_Period: \_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_

**2.6A NOTES – Perimeters and Areas of Similar Figures**

*Objective: Create rectangles to discover ratios of perimeters and areas of similar figures. CCSS: 8.G.4*

*HW: (2.6A) p. 80 #1 – 7, 10, 11*

Sketch the following rectangles and answer the questions below.

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| **For the rectangles (2x4) (3x6) (4x8)**  **A B C D**    P = \_\_\_\_ P = \_\_\_\_ P = \_\_\_\_ P = \_\_\_\_ |

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| You should have created 3 figures that were similar to the original figure. Do you notice any patterns or relationships? What can you conclude about corresponding sides of similar figures and their perimeters? |

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| **For the rectangles (2x4) (3x6) (4x8)**  **A B C D**    AREA = \_\_\_\_\_ AREA = \_\_\_\_\_ AREA = \_\_\_\_\_ AREA = \_\_\_\_\_ |

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| You should have created 3 figures that were similar to the original figure. Do you notice any patterns or relationships? What can you conclude about corresponding sides of similar figures and their areas? |

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**EXAMPLES**

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| --- | --- | --- | --- |
| The two figures are similar. Find the ratios (red to blue) of the perimeters and of the areas.   |  |  |  | | --- | --- | --- | | **R**  **B** |  |  | |

**ON YOUR OWN**

The two figures are similar. Find the ratios (shaded to non-shaded) of the perimeters and of the areas.

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| 1.    Perimeter: \_\_\_\_\_\_\_\_ Area: \_\_\_\_\_\_\_\_ | 2.    Perimeter: \_\_\_\_\_\_\_\_ Area: \_\_\_\_\_\_\_\_ |
| 3. You buy two picture frames that are similar. The ratio of the corresponding side lengths is 4:5. What is  the ratio of the areas?  The ratio of the area is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 4. The base of Triangle P is 8 meters. The base of a similar Triangle Q is 7 meters. What is the ratio of the  area of P to the area of Q?  The ratio of the area is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 5. The height of Figure A is 9 feet. The height of a similar Figure B is 15 feet. What is the ratio of the  perimeter of A to the perimeter of B?  The ratio of the perimeter is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |