Honors Geometry Name: Quang Huynh

Worksheet 5.1

**1. Circle whether the following situations are REDUCTIONS OR ENLARGEMENTS.**



|  |  |  |
| --- | --- | --- |
| a) Scale Factor of 7:1  (image : pre-image) | b) | c) |
|  |  |  |
| Reduction or Enlargement | Reduction or Enlargement | Reduction or Enlargement |
|  |  |  |
| d) | e) Scale Factor of 2:3   (image : pre-image) | f) |
|  |  |  |
| Reduction or Enlargement | Reduction or Enlargement | Reduction or Enlargement |
|  |  |  |
| g) | h) | i) |
|  |  |  |
|  |  |  |
| Reduction or Enlargement | Reduction or Enlargement | Reduction or Enlargement |
|  |  |  |
| J) | k) | l) |
|  |  |  |
|  |  |  |
| Reduction or Enlargement | Reduction or Enlargement | Reduction or Enlargement |

**2. Determine the missing point.**



|  |  |  |
| --- | --- | --- |
|  | | |
| a) | b) | c) |
|  |  |  |
| d) | e) | f) |
|  |  |  |
| g) | h) | i) |

**3. Determine the ratio. (Reduce the ratio)**

|  |  |  |
| --- | --- | --- |
|  | | |
| a) CD : DE \_\_\_\_\_\_\_ : \_\_\_\_\_\_\_ | b) EB : BD \_\_\_\_\_\_\_ : \_\_\_\_\_\_\_ | c) CD : DA \_\_\_\_\_\_\_ : \_\_\_\_\_\_\_ |
|  |  |  |
| d) AC : CD \_\_\_\_\_\_\_ : \_\_\_\_\_\_\_ | e) CE : CD \_\_\_\_\_\_\_ : \_\_\_\_\_\_\_ | f) AC : AB \_\_\_\_\_\_\_ : \_\_\_\_\_\_\_ |

**4. Answer the following questions about the dilation, centered at O.**

|  |  |
| --- | --- |
| a) Is this an enlargement or a reduction? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Explain how you determined your answer.  The image moved further away from the center  b) What scale factor do you think this is? \_\_\_\_\_\_\_\_\_\_\_\_  Explain how you determined your answer.  Eyeing and estimating  c) What angle is the same size as ∠OBA? \_\_\_\_\_\_\_\_\_\_\_\_ Explain how you determined your answer.  Angles are preserved and are the same in dilations |  |

**5. Answer the following questions about the dilation centered at O with a scale factor of 3.   
OA = 3, OB = 5 and AB = 4**

|  |  |
| --- | --- |
| a) A’B’ = \_\_\_\_\_\_\_\_\_\_\_\_\_  b) OB’ = \_\_\_\_\_\_\_\_\_\_\_\_\_  c) OA’ = \_\_\_\_\_\_\_\_\_\_\_\_\_  d) AA’ = \_\_\_\_\_\_\_\_\_\_\_\_\_ (be careful)  e) BB’ = \_\_\_\_\_\_\_\_\_\_\_\_\_ (be careful)  f) What is the ratio of OA:AA’? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |