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| **Unit 2 – Dilations & Similarity Study Guide** | Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Blk: \_\_\_\_\_ |
| 1) A dilation is a transformation that results in similar shapes. Therefore, the corresponding parts of both shapes share these properties except which one? A) Congruent angles B) Parallel sides C) Co-linear points D) Proportional sides E) Congruent sides |
| 2) Dilate the polygon by a scale factor of 1.5 about the origin **and list the post-image points as decimals**.**W’ = \_\_\_\_\_\_****T’ = \_\_\_\_\_\_\_****F’ = \_\_\_\_\_\_\_****K’ = \_\_\_\_\_\_\_** | 3) Dilate the triangle by a scale factor of ½ about the origin **and list the post-image points as decimals**.**J’ = \_\_\_\_\_\_****B’ = \_\_\_\_\_\_\_****G’ = \_\_\_\_\_\_\_** |
| In the figure at right, determine the following information:4) Stretch or Shrink5) Scale Factor: \_\_\_\_\_\_\_\_ |  |
| *Triangle Similarity Proofs* |
| Write the triangle similarity statement and by theorem using $AA\~, SAS\~, or SSS\~.$ **SHOW YOUR PROPORTIONS!** |
| 6) $∆ABC \~ $\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_ | 7) $∆HGJ \~ $\_\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_ |
| 8) $∆ABC \~ $\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_ | 9) $∆PQR \~ $\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_ |

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| *Triangle Proportionality & Midsegment Theorem* |
| 10) Find x. | 11) If $\overbar{AB}=12, \overbar{CD}=32 and \overbar{DE}=14$, find the perimeter of each triangle listed below.Perimeter of $∆ABE$ = \_\_\_\_\_\_, Perimeter of $∆ACD$ = \_\_\_\_\_\_ |
| *Applications of Similarity - Solve each word problem to two decimals.* |
| 12) In the diagram at right, a man looks down at a mirror from an eye level of 6 ft. His toes are 3.5 feet from the mirror’s center which is 10.5 ft from a vertical line draw from the top of the signal to the ground. If he can see the top-front of the signal, how high is it? |  |
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