8-1 Opener - Dilations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Determine whether the dilation from the figure on the left to the figure on the right is an enlargement or a reduction. Then find the scale factor of the dilation.

**A blue and green hexagons on a black background

Description automatically generated**

**A black background with a blue rectangle and a black rectangle

Description automatically generated**

1. *F*or each set of triangle vertices, find the coordinates of the vertices of the image after a dilation of the triangle by the given scale factor.

*A*(–4, 4), *B*(4, 4), *C*(4, –2), *k* = 0.5

8-1 Exit Slip - Dilations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Determine whether the dilation from the figure on the left to the figure on the right is an enlargement or a reduction. Then find the scale factor of the dilation.

**A green rectangle on a black background

Description automatically generatedA blue and green rectangles

Description automatically generated**

1. *F*or each set of triangle vertices, find the coordinates of the vertices of the image after a dilation of the triangle by the given scale factor.

*T*(–1, –3), *U*(–4, –4), *V*(–3, –2), *k* = 2

8-2 Opener – Similar Polygons

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. **A blue and pink triangles on a black background

   Description automatically generated**Determine whether each pair of figures is similar. If so, find the scale factor. Explain your reasoning.

**A blue triangles on a black background

Description automatically generated**

1. Each pair of polygons is similar. Find the value of x.

**A blue and pink triangles

Description automatically generatedA blue and pink hexagon on a black background

Description automatically generated**

8-2 Exit Slip – Similar Polygons

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. **A screenshot of a black background

   Description automatically generated**Determine whether each pair of figures is similar. If so, find the scale factor. Explain your reasoning.

**A blue and pink triangles

Description automatically generated**

1. Each pair of polygons is similar. Find the value of x.

**A blue and pink rectangles

Description automatically generatedA blue and pink rectangles on a black background

Description automatically generated**

8-3 Opener – Similar Triangles: AA Similarity

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. **A blue line on a black background

   Description automatically generatedA blue triangle with a pink face

   Description automatically generated**Determine whether each pair of triangles is similar. Explain your reasoning.

A blue line on a black background

Description automatically generated**A blue lines on a black background

Description automatically generated**

8-3 Exit Slip – Similar Triangles: AA Similarity

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Determine whether each pair of triangles is similar. Explain your reasoning.

**A blue triangles on a black background

Description automatically generatedA blue lines on a black background

Description automatically generated**

**A blue triangle with pink lines

Description automatically generated**

**A blue and pink triangles

Description automatically generated**

8-4 Opener – Similar Triangles: SSS and SAS Similarity

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Determine whether each pair of triangles is similar. Explain your reasoning.

**A blue lines on a black background

Description automatically generatedA blue and pink triangles on a black background

Description automatically generated**

1. Identify the similar triangles. Then find the value of x. Round your answer to the nearest tenth, if necessary.

**A blue and pink triangle with a black background

Description automatically generated**

**A blue lines on a black background

Description automatically generated**

8-4 Exit Slip – Similar Triangles: SSS and SAS Similarity

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Determine whether each pair of triangles is similar. Explain your reasoning.

**A blue and pink lines on a black background

Description automatically generated**

**A blue triangle on a black background

Description automatically generated**

1. Identify the similar triangles. Then find the value of x. Round your answer to the nearest tenth, if necessary.

**A blue and pink lines on a black background

Description automatically generated**

**A blue and pink triangle

Description automatically generated**

8-5 Opener – Triangle Proportionality

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Use the figure to answer the question.

**A blue and pink triangle with a black background

Description automatically generated**If *NL* = 3, *KL* = 12, and *KJ* = 16, find *KP.*

1. DF, FG, and GD are midsegments of ∆ABC. Find the value of x.

**A blue triangle with black background

Description automatically generatedA blue triangle with black background

Description automatically generated**

8-5 Exit Slip – Triangle Proportionality

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Use the figure to answer the question.

**A blue and pink triangle with a black background

Description automatically generated**If *KP* = 24, *PJ* = 8, and *NL* = 7, find *KL.*

1. DF, FG, and GD are midsegments of ∆ABC. Find the value of x.

**A blue line on a black background

Description automatically generatedA blue triangle with black background with Great Pyramid of Giza in the background

Description automatically generated**

8-6 Opener – Parts of Similar Triangles

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. A blue and pink triangles

   Description automatically generatedEach pair of triangles is similar. Find the value of x.

1. **A blue and pink triangles

   Description automatically generated** If ∆JKL~∆ZYX, KN is an altitude of ∆*JKL,* YW is an altitude of ∆*ZYX, JK* = 22, *KN* = 18, and *YW* = 15, find *ZY.*
2. Find the value of each variable to the nearest tenth.

A blue lines on a black background

Description automatically generated

8-6 Exit Slip – Parts of Similar Triangles

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. **A blue lines on a black background

   Description automatically generated**Each pair of triangles is similar. Find the value of x.

1. If ∆ABC~∆FGH, BD is an altitude of ∆*ABC,* GK is an altitude of ∆*FGH, AB* = 4, *BD* = 3, and *FG* = 6, find *GK.*

**A close-up of a triangle

Description automatically generated**

1. A blue lines with a pink circle in the center

   Description automatically generatedFind the value of each variable to the nearest tenth.