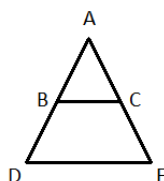
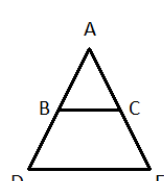
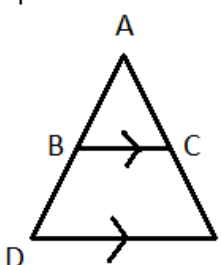
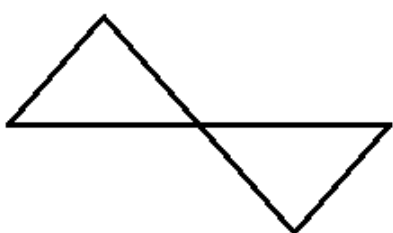
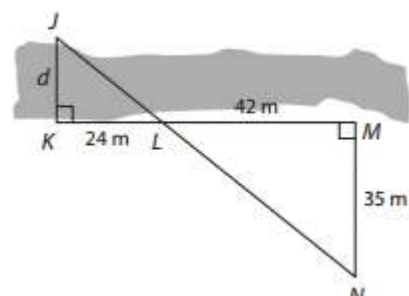
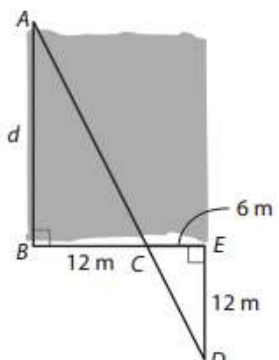
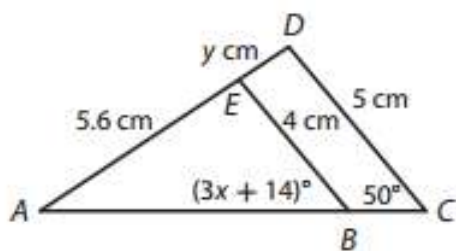


| | | | |
|----------------------|---|--|--|
| <p>5 pts</p> | <p>1) The midsegment of a triangle has a length of 2 m. What is the length of the third side of the triangle that is parallel to the midsegment?</p> | <p>2) If BC is the midsegment and is 5in. What is DE?</p>  | <p>3) BC is the midsegment of the triangle. If DE is 8cm. What is BC?</p>  |
| <p>5 pts</p> | <p>4) A triangle is formed by the following coordinates: A(3,2), B(-2,4), and C(5,-5). What are the coordinates of the image after a dilation by a scale factor of 4?</p> | <p>5) True or False, a dilation will always produce an image that is congruent to the pre-image.</p> | <p>6) True or False. If the scale factor, k, of a dilation is greater than 1, the image will be larger than the pre-image.</p> |
| <p>5 pts</p> | <p>7) Circle the word that makes the sentence true: If the scale factor of a dilation is $\frac{3}{5}$, the pre-image will be _____ than the image. (Larger or Smaller)</p> | <p>8) Are the two triangles similar? Explain.</p>  | <p>9) Are the two triangles similar? Explain.</p>  |
| <p>10 pts</p> | <p>10) Which of the following is a dilation? (Circle all that apply)</p> <ul style="list-style-type: none"> A. $(x, y) \rightarrow (x, 3y)$ B. $(x, y) \rightarrow (3x, -y)$ C. $(x, y) \rightarrow (3x, 3y)$ D. $(x, y) \rightarrow (x, y - 3)$ E. $(x, y) \rightarrow (x - 3, y - 3)$ | | <p>11) Rectangle JKLM maps to rectangle RSTU by the transformation $(x, y) \rightarrow (4x, 4y)$. If the perimeter of RSTU is x, what is the perimeter of JKLM in terms of x?</p> |
| <p>10 pts</p> | <p>12) Line segment JK in the coordinate plane has endpoints with coordinates $J(-2, 5)$ and $K(2, -3)$. Graph \overline{JK} and find the location of point M so that M divides \overline{JK} into two parts with lengths in a ratio of 1: 4 from J to K.</p> | <p>13) Find the value of d.</p>  | |
| <p>10 pts</p> | <p>14) Find the value of d.</p>  | | <p>15) Two triangles are given with the following side lengths: Triangle 1 with side lengths of 3, 4, and 5 Triangle 2 with side lengths of 12, 16, and 15</p> <p>Are the triangles similar? Explain.</p> <p>Are the triangles congruent? Explain.</p> |

20 pts

16) Given: $\triangle ABE \sim \triangle ACD$.

Find the value of x and y .



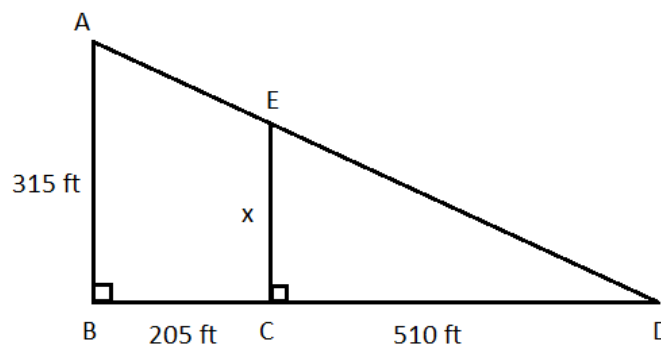
17) Consider two similar triangles $\triangle ABC$ and $\triangle A'B'C'$. If both $m\angle A' = m\angle C$ and $m\angle B' = m\angle A$, what can you conclude about triangle $\triangle ABC$? Explain your reasoning.

20 pts

18) Apply a dilation to \overline{XY} with endpoint $X(-2,3)$ and $Y(4,-5)$. Use the origin as the center and a scale factor of 2. Label the line segment after dilation $X'Y'$. Describe the relationship between the two segments. Provide a sketch of each segment.

Find the length of each segment.

19) Find the value of x to the nearest tenth.



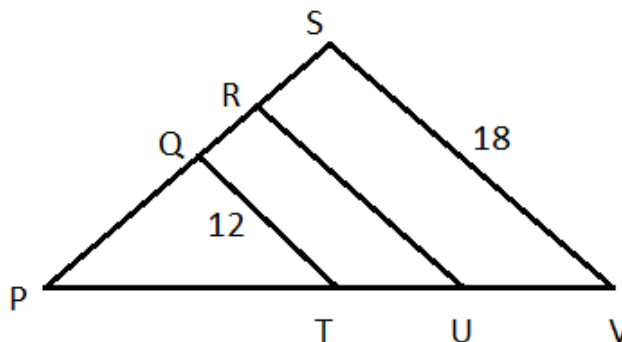
50 pts

20) You are taking a family trip to Disneyland from Phoenix. Phoenix is represented by point $(17, 5)$ and Disneyland is represented by $(5, 10)$ on a grid where 1 grid line is equal to 60 miles.

Plot the points on a grid.

What point represents the rest stop that is 487.5 miles into the trip? Be sure to show your work.

21) Given: $\overline{QT} \parallel \overline{SV}$ & $\triangle PQT$ is isosceles.



Can you find PS ? If so, what is the length? If not, what additional information is needed?

Can you find QR ? If so, what is the length? If not, what additional information is needed?