

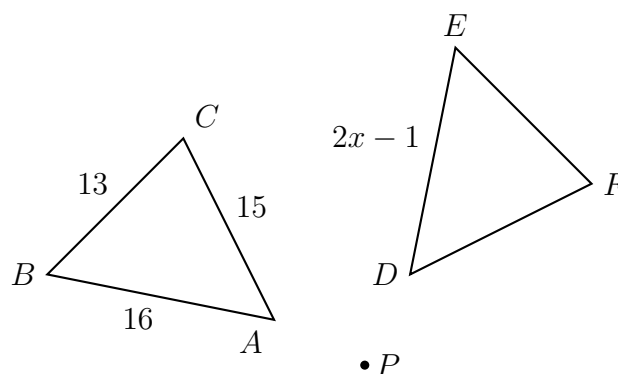
19 March 2019

Name:

8-12 Do Now: Regents Geometric Situations

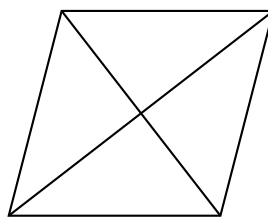
1. After a dilation with center $(0,0)$, the image of \overline{MN} is $\overline{M'N'}$. If $MN = 4.5$ and $M'N' = 18$, find the scale factor of this dilation.

2. In the diagram below, $\triangle ABC$ with sides of 13, 15, and 16, is mapped onto $\triangle DEF$ after a clockwise rotation of 90° about point P .



If $DE = 2x - 1$, what is the value of x ?

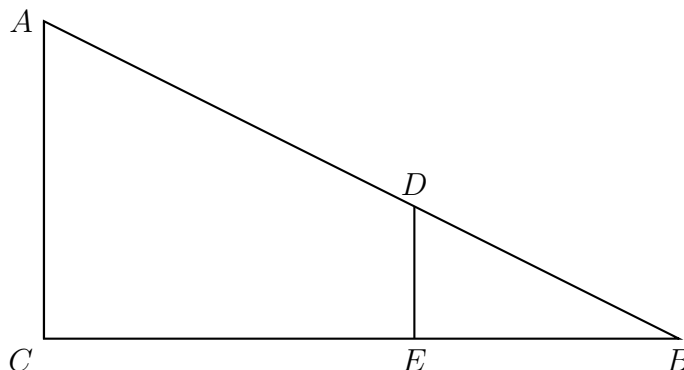
3. The figure shows a rhombus with noncongruent diagonals.



Which transformations carries the rhombus onto itself? Mark each True or False.

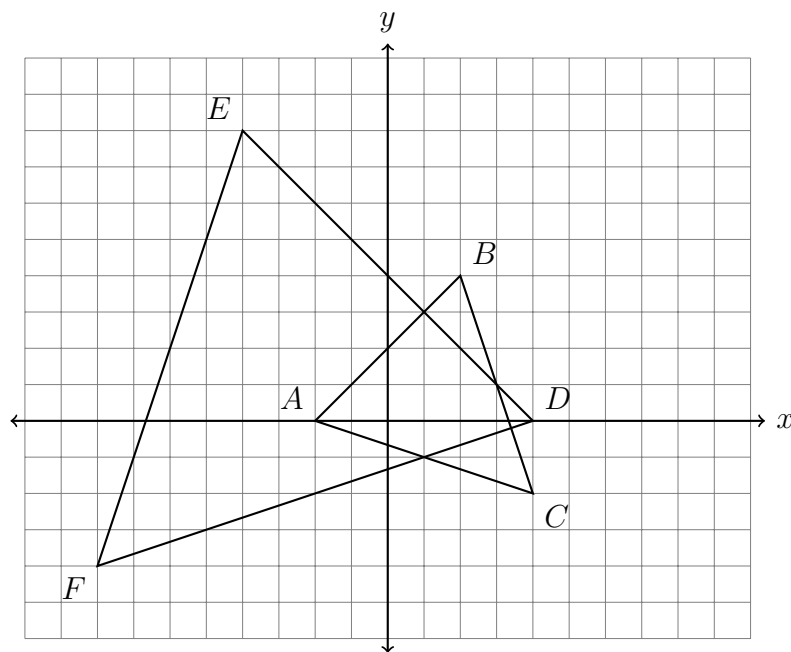
- | | | |
|---------------------------------------------------------------------------------|------|-------|
| (a) A reflection over the shorter diagonal | True | False |
| (b) A reflection over the longer diagonal | True | False |
| (c) A clockwise rotation of 90° about the intersection of the diagonals | True | False |
| (d) A clockwise rotation of 180° about the intersection of the diagonals | True | False |

4. In right triangle ABC shown below, point D is on \overline{AB} and point E is on \overline{BC} such that $\overline{AC} \parallel \overline{DE}$



If $AB = 15$, $BC = 12$, and $EC = 7$, what is the length of \overline{BD} ?

5. *Spicy* On the set of axes below, $\triangle ABC$ has vertices at $A(-2, 0)$, $B(2, 4)$, $C(4, -2)$, and $\triangle DEF$ has vertices at $D(4, 0)$, $E(-4, 8)$, $F(-8, -4)$.



Which transformations map $\triangle ABC \rightarrow \triangle DEF$? Mark each statement True or False

- | | | |
|--------------------------------------------------------------------------------------------------------------------------|------|-------|
| (a) A dilation with a scale factor of -2 centered at the origin | True | False |
| (b) A dilation with a scale factor of $\frac{1}{2}$ centered at point A | True | False |
| (c) A dilation with a scale factor of 2 centered at the origin, followed by a rotation of 180° about the origin | True | False |
| (d) A dilation with a scale factor of 2 centered at the origin, followed by a reflection across the y -axis | True | False |