Unit 6: Distance & slope   Name:

11 December 2019

6.11b Do Now: Transformations and review

(complete 12 stars per group)

1. A dilation with $k = 3$ centered at the origin maps $\triangle DEF$ onto $\triangle LMN$.

   The following is given: Fill in the blanks: (1 star each. 4 total)

   $DE = 7.5$
   $m\angle E = 43°$
   $m\angle F = 108°$
   $m\angle M = 5x + 8°$

   (a) $D \rightarrow$ _____

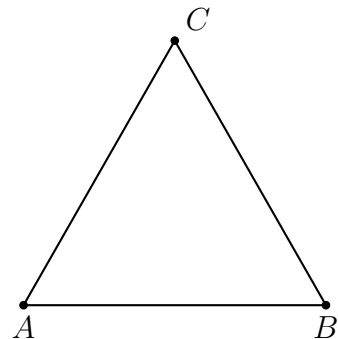   (b) $LM =$ _____

   (c) $m\angle M =$ _____

   (d) Solve for x

2. What translation maps $\triangle ABC$ onto $\triangle DEF$, shown below? Fully specify the transformation.   (2 stars)
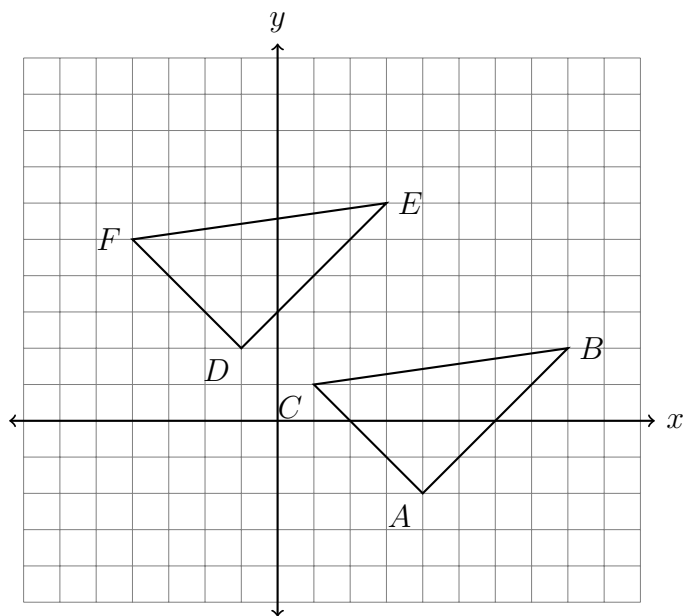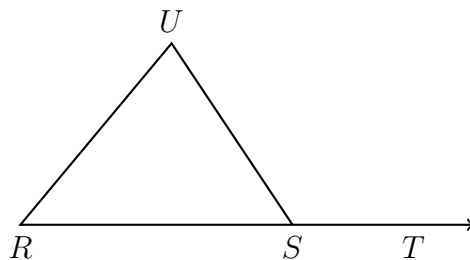

3. A translation maps $X(1,6) \rightarrow X'(-2,9)$. What is the image of $Y(10,-2)$ under the same translation?   (2 stars)
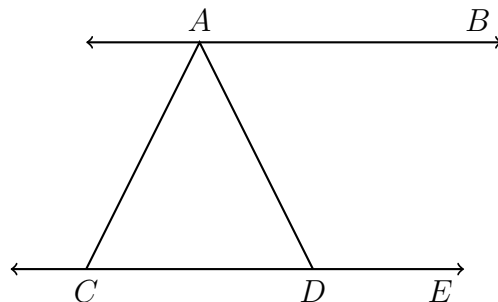
4. Given isosceles $\triangle ABC$ with $\overline{AC} \cong \overline{AB}$, $m\angle A = x$, $m\angle B = 57$, and $m\angle C = y$. Mark and label the triangle, then find x and y. (*the diagram is not to scale*)(2 stars)

5. Given isosceles $\triangle RSU$ with $\overline{UR} \cong \overline{RS}$. If $m\angle UST = 130$ find $m\angle U$. (Mark and label the diagram) (*the diagram is not to scale*)(2 stars)
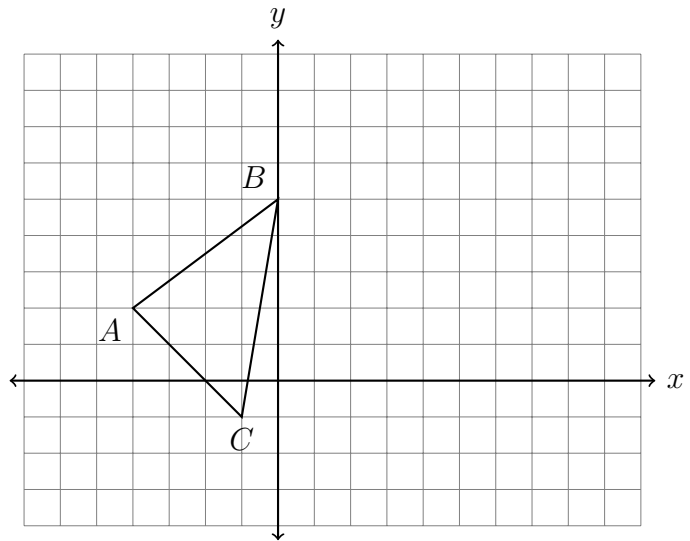

6. Given parallel lines $\overleftrightarrow{AB} \parallel \overleftrightarrow{CDE}$ with $\overline{AC} \cong \overline{AD}$. If $m\angle BAD = 70$ find $m\angle ACD$. (completely mark and label the diagram) (3 stars)
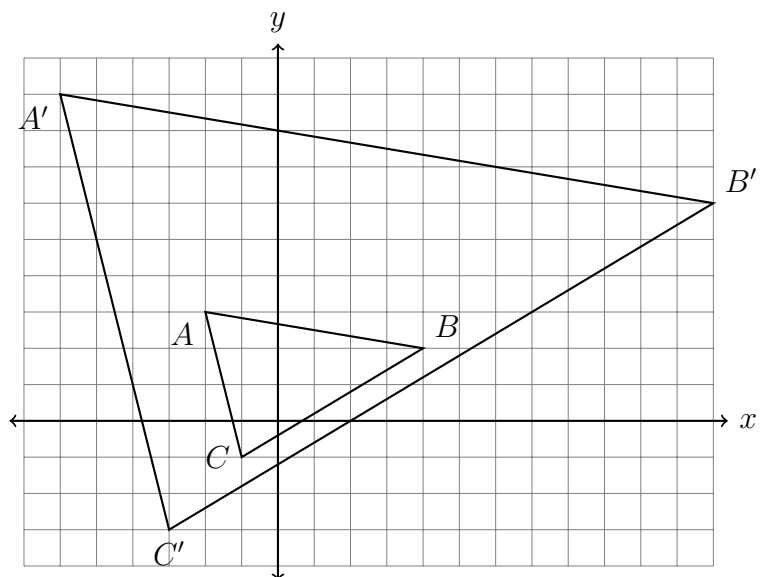
7. Find the image of $P(3,1)$ after the translation $(x,y) \to (x-7, y+2)$.   (1 star)

8. Translate $\triangle ABC$ by $(x,y) \to (x+5, y-2)$. Make a table of the coordinates and plot and label the image on the axes.   (2 stars)

9. A transformation maps $\triangle ABC \to \triangle A'B'C'$. Make a table of the coordinates of both triangles and fully specify the transformation.   (3 stars)

10. Two transformations are applied to $\triangle ABC$, first a dilation with scale factor $k = 2$ centered at the origin, then a translation down 5 and to the right 3. Make a table of the coordinates showing $\triangle ABC \to \triangle A'B'C' \to \triangle A''B''C''$ and plot and label the images on the axes. (3 stars)