

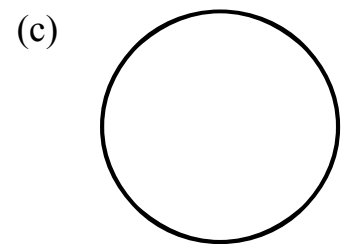
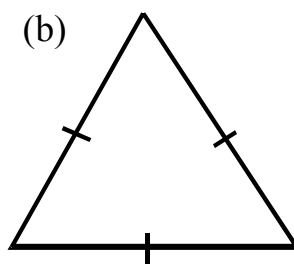
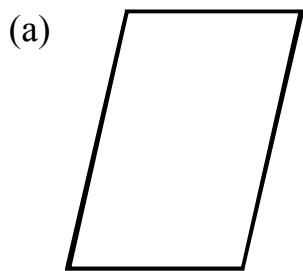
Exercise 2015-8ER-00003(1)

(1) Use quad paper or graph paper and draw the following on the same Cartesian plane:

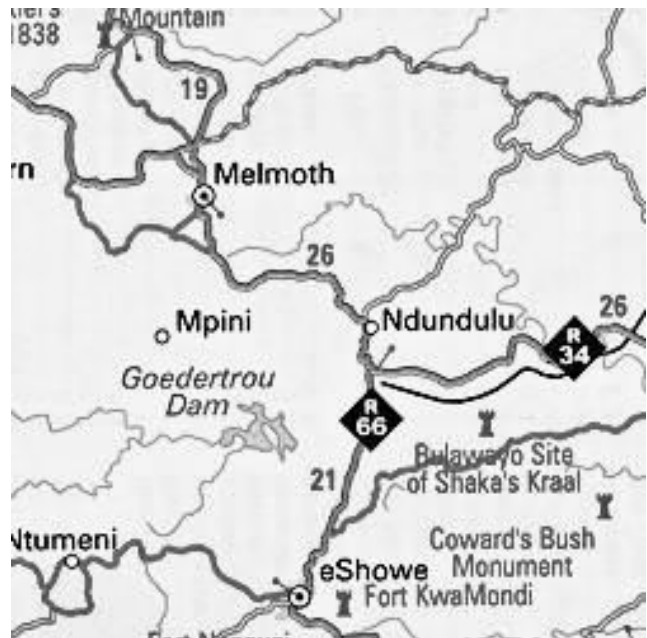
- (a) M and N, for M as the reflection of $N(-1 ; 5)$ in the y-axis.
- (b) ST and S'T' with $S(1 ; 2)$ and $T(2 ; 5)$ if $ST \rightarrow S'T'$ is a rotation of 180° .
- (c) ΔABC translates 4 units upwards and 5 units to the left.

Draw both ΔABC and $\Delta A' B' C'$. $A(4 ; 1)$, $B(4 ; -5)$ and $C(2 ; -5)$

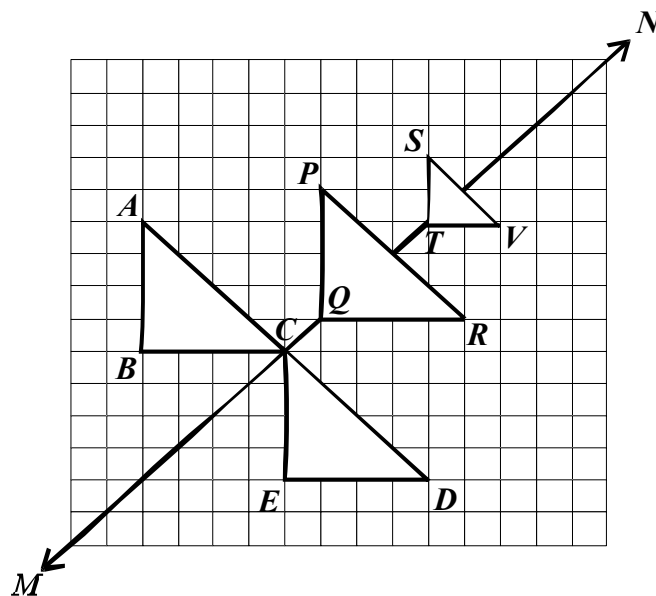
(2) Draw at least THREE lines of symmetry in on each figure, if possible:



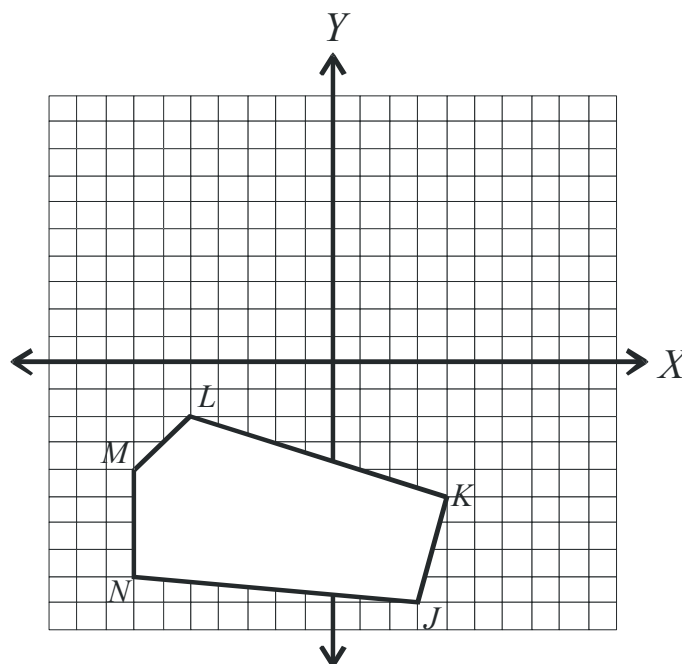
- (3) If the scale on the map is 1:700 000, calculate the true direct distance (as the crow flies), between Melmoth and eShowe.



- (4) (a) Is $\triangle ABC$ a reflection of $\triangle CDE$ in the line MN ?
- (b) Is $\triangle ABC$ a translation of $\triangle PQR$?
If so, describe the translation.
- (c) Is $\triangle ABC$ an enlargement / reduction of $\triangle STV$? If so, write the factor of enlargement / reduction.



- (5) (a) Write the coordinates of J, K, L, M and N.
- (b) Draw $J'K'L'M'N'$ if $JKLMN \rightarrow J'K'L'M'N'$ as a translation of: $(x + 2 ; y + 12)$
- (c) Write the coordinates of J', K', L', M' and N' .



- (6) Scale 1:15 000

If necessary, round off correct to 4 dec.

- (a) Calculate the distance (in km) of Zita street, between Gert Potgieter street and Petronella street.
- (b) Calculate the area of Zita Park in km^2 .
- (c) Determine what the scale will be if the actual distance of Zita street between Len Brown street and Petronella street, is 770 m.



