Mathematics Grade 7 Week 4

Symmetry

Example

Draw the line(s) of symmetry (if any) of the following figures.
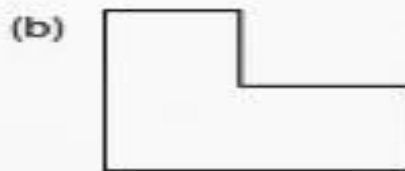
(a)
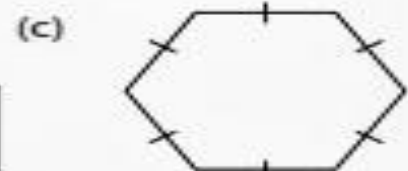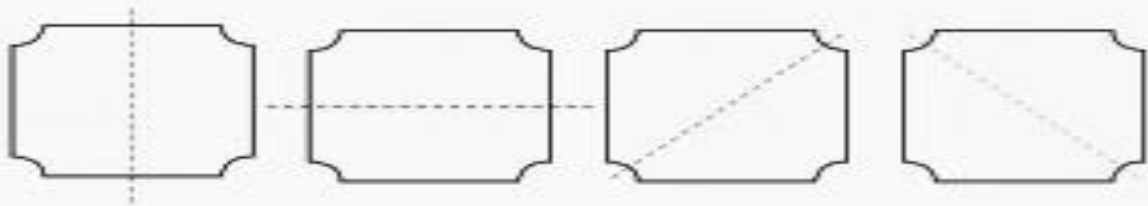
(b)

(c)

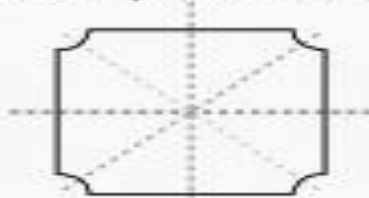Fig. 1   Fig. 2   Fig. 3

Solution

To locate the line(s) of symmetry of each figure, we need to decide how to fold the figure (horizontally, vertically or inclined) into two so that the two parts fit exactly onto each other.

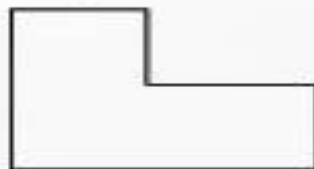(a) Fig. 1 can be folded into halves in the following ways:

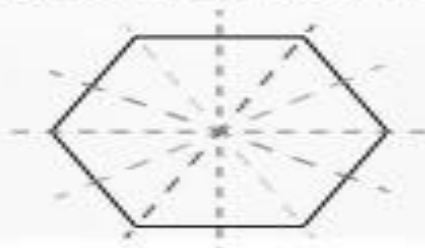Combining the different possibilities, we obtain:

(b) Fig.2 is not symmetrical because when we fold it into halves, they do not fit exactly onto each other.
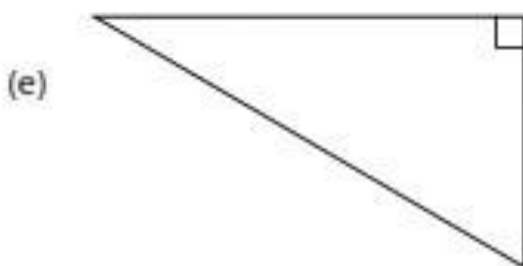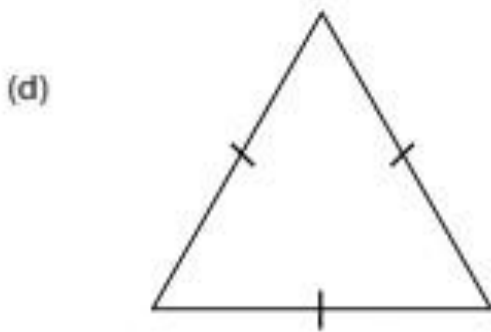   **Can you find out why?**

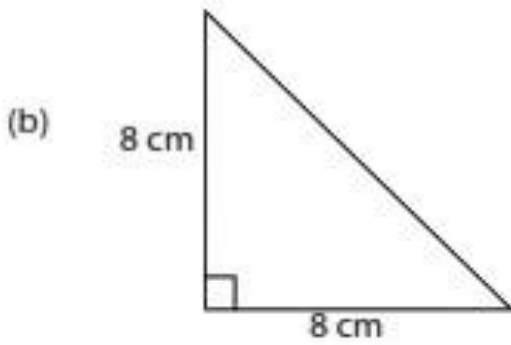(c) Fig. 3 can be folded into halves in six different ways and the dotted lines drawn are the lines of symmetry.

1. Draw the line(s) of symmetry, if any, of the following triangles.

(a)

(b) 8 cm

8 cm

(c) 50°

100°

(d)

(e)
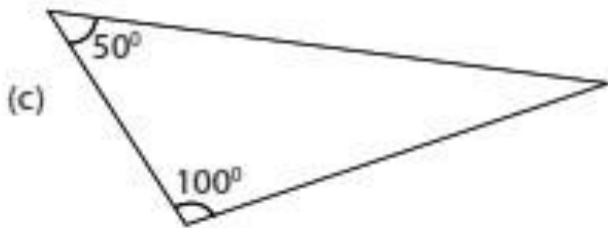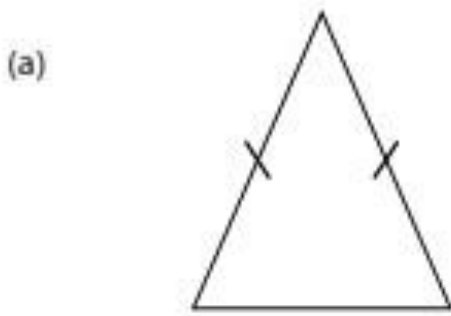
2. Locate and draw the line(s) of symm if any, of the following quadrilaterals

(a) 6 cm

6 cm

(b)

(c)

(d)

(e)

(f)
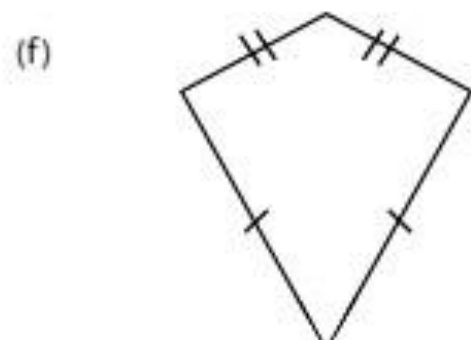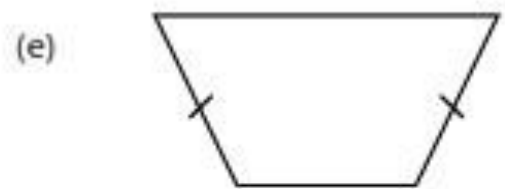
3. Draw the line(s) of symmetry, if any, of the following.
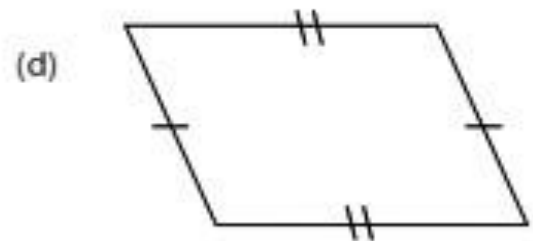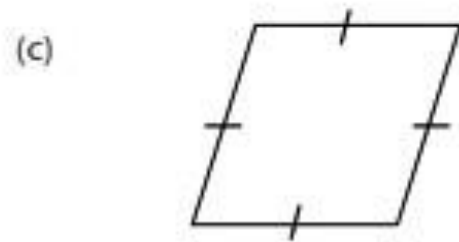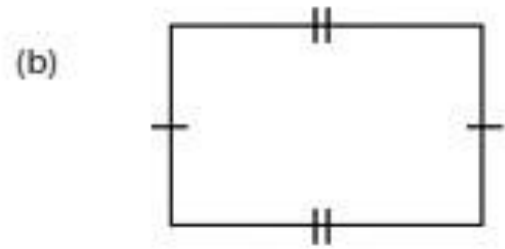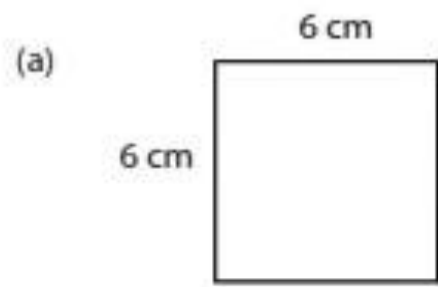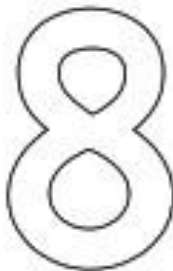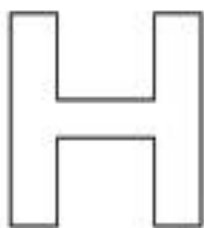
(a)

(b)

(c)

(d)

(e)

4. Circle the correct answer.

(a) How many lines of symmetry does a square have?

A. 1   B. 2
C. 3   D. 4

(b) The figure has ------ line(s) of symmetry.

A. 0   B. 1
C. 2   D. 3

(c) A circle has ------- line(s) of symmetry.

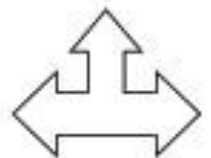A. 0   B. 4
C. 10   D. infinite

(d) How many line(s) of symmetry does a regular decagon have?

A. 0   B. 5
C. 9   D. 10

(e) The figure has ------- line(s) of symmetry.

A. 0   B. 1
C. 2   D. 3

(f) A rhombus has ------- line(s) of symmetry.

A. 0   B. 1
C. 2   D. 4

(g) Which of the following has no line of symmetry?

A. rectangle   B. rhombus
C. parallelogram   D. circle

(h) How many line(s) of symmetry does the figure have?

A. 0   B. 3
C. 6   D. infinite