

Name: \_\_\_\_\_

Date: \_\_\_\_\_

- The measurements of four of the interior angles of a pentagon are  $118^\circ$ ,  $78^\circ$ ,  $100^\circ$  and  $143^\circ$ . What is the measure of the missing angle?

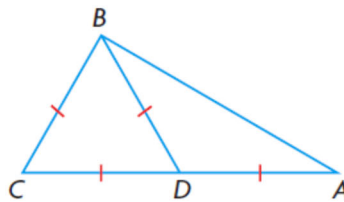
- Honeybees make honeycombs to store their honey. The base of each honeycomb is roughly a regular hexagon. Explain why a regular hexagon can be used to tile a surface.



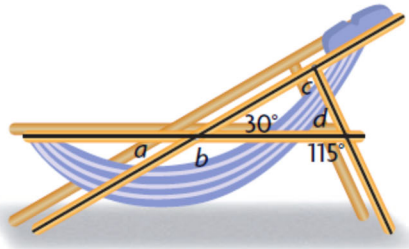
- Determine the measure of each interior angle of a loonie.



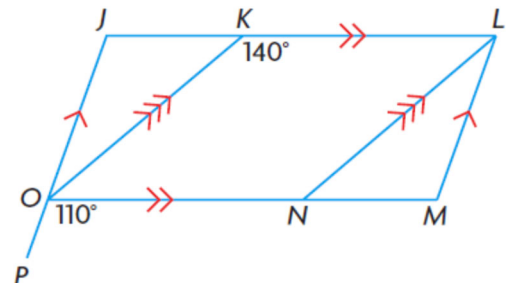
- Prove:  $\angle A = 30^\circ$



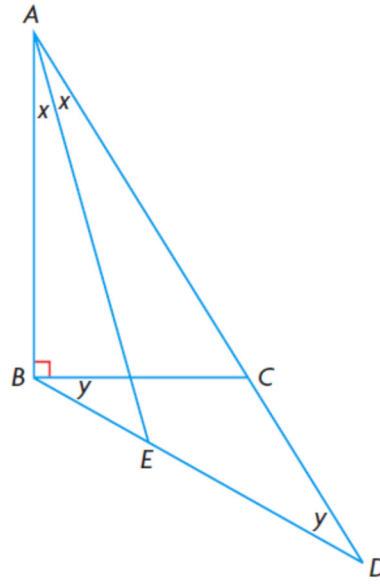
- A manufacturer is designing a reclining lawn chair, as shown. Determine the measures of  $\angle a$ ,  $\angle b$ ,  $\angle c$ , and  $\angle d$ .



- Use the given information to determine the measures of  $\angle J$ ,  $\angle JKO$ ,  $\angle JOK$ ,  $\angle KLM$ ,  $\angle KLN$ ,  $\angle M$ ,  $\angle LNO$ ,  $\angle LNM$ ,  $\angle MLN$ ,  $\angle NOK$ , and  $\angle JON$ .



7. Given:  $AE$  bisects  $\angle BAC$ .  
 $\triangle BCD$  is isosceles.  
 Prove:  $\angle AEB = 45^\circ$



8.  $\triangle LMN$  is an isosceles triangle in which  $LM = LN$ .  $ML$  is extended to point  $D$ , forming an exterior angle,  $\angle DLN$ . If  $LR \parallel MN$ , where  $N$  and  $R$  are on the same side of  $MD$ , prove that  $\angle DLR = \angle RLN$ .