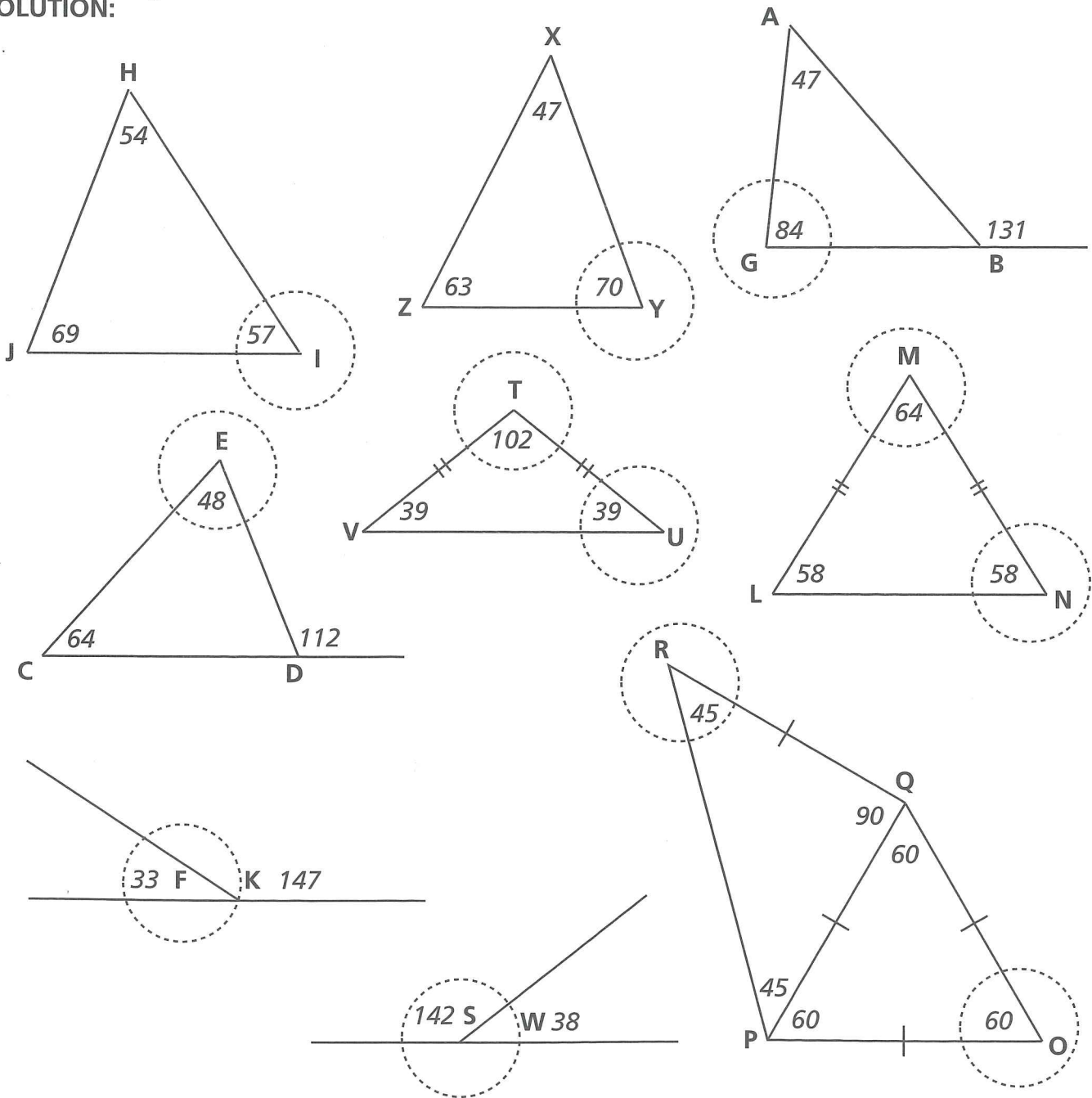


Hidden Message

This game is based upon the geometry of the triangle and the line. It only requires knowledge of the sum of angles in a triangle and adjacent angles on a line and the words exterior, isosceles and equilateral. It also reinforces the ability to translate a sentence into a diagram.

Topics: Basic geometry
Ages: 11 to 12

SOLUTION:



MESSAGE:

84° 48° 60° 64° 48° 102° 45° 70° 57° 142° 33° 39° 58°
G E O M E T R Y I S F U N



Hidden Message

The triangle TUV is isosceles and has $TU = TV$. The triangle CED has its exterior angle at D equal to 112° .
Find the size of the angle I in the triangle HIJ.



Hidden Message

Triangle LMN is isosceles and has $LM = MN$.
Triangle ABG has its exterior angle at B equal to 131° .
Find the size of the angle F.



Hidden Message

When you have worked out the twelve angles then you will be able to de-code this message:
 $84^\circ, 48^\circ, 60^\circ, 64^\circ, 48^\circ, 102^\circ, 45^\circ, 70^\circ, 57^\circ, 142^\circ, 33^\circ, 39^\circ, 58^\circ$.



Hidden Message

Triangle ABG has its angle A equal to 47° .
The angle W is equal to 38° .
Find the size of the angle Y in triangle XYZ.



Hidden Message

The triangle XYZ has its angle X equal to 47° and the triangle HIJ has its angle J equal to 69° .
Find the size of the angle R in the triangle PQR.



Hidden Message

Construct a series of separate triangles and other geometrical diagrams and then work out the values of twelve unknown angles.



Hidden Message

The triangle HIJ has its angle H equal to 54° and the triangle PQR has its angle Q equal to 90° .
Find the size of the angle O in the triangle OPQ.



Hidden Message

The triangle CED has its angle C equal to 64° and the triangle LMN has its angle L equal to 58° .
Find the sizes of the angles T and U in triangle TUV.



Hidden Message

Triangle OPQ is equilateral.
Find the sizes of the angles M and N in the triangle LMN.



Hidden Message

A straight line has two adjacent angles on it, called F and K and the triangle XYZ has its angle Z equal to 63° .
Find the size of the angle S.



Hidden Message

A straight line has two adjacent angles on it, called S and W and the triangle TUV has its angle V equal to 39° .
Find the size of the angle E in the triangle CED.



Hidden Message

The triangle PQR is isosceles and has $PQ = RQ$ and the angle K is equal to 147° .
Find the size of the angle G in the triangle AGB.