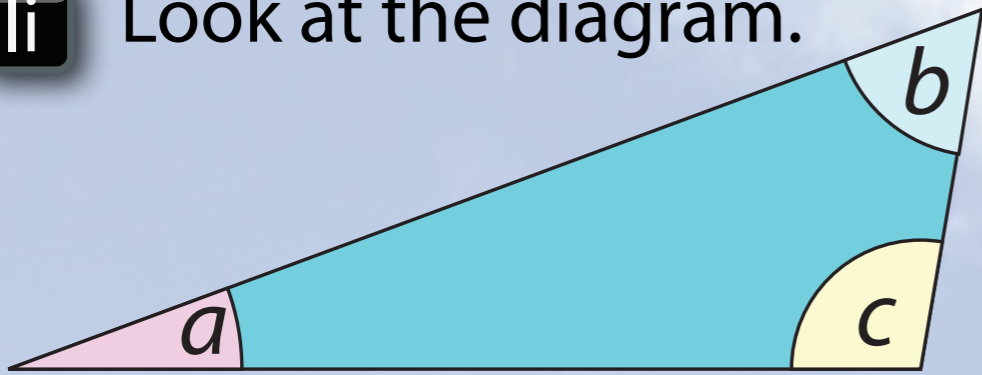


ii Look at the diagram.



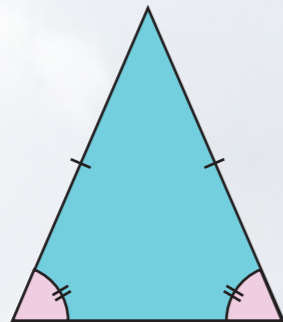
$$b = 3a$$

$$a + b + c = 180^\circ$$

a Continue the table:

a	b	c
10°	30°	140°

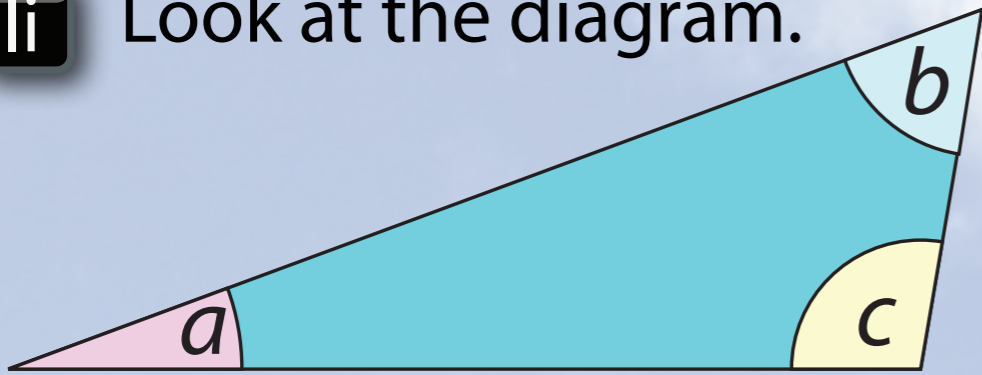
b Can the triangle be isosceles?



c Can the triangle be right-angled?



ii Look at the diagram.



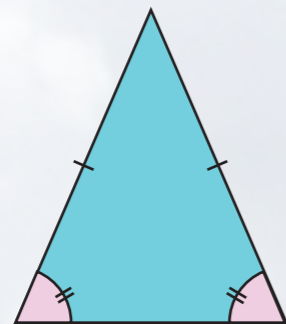
$$b = 3a$$

$$a + b + c = 180^\circ$$

a Continue the table:

a	b	c
10°	30°	140°
20°	60°	100°

b Can the triangle be isosceles?



$$36^\circ, 108^\circ, 36^\circ$$

c Can the triangle be right-angled?



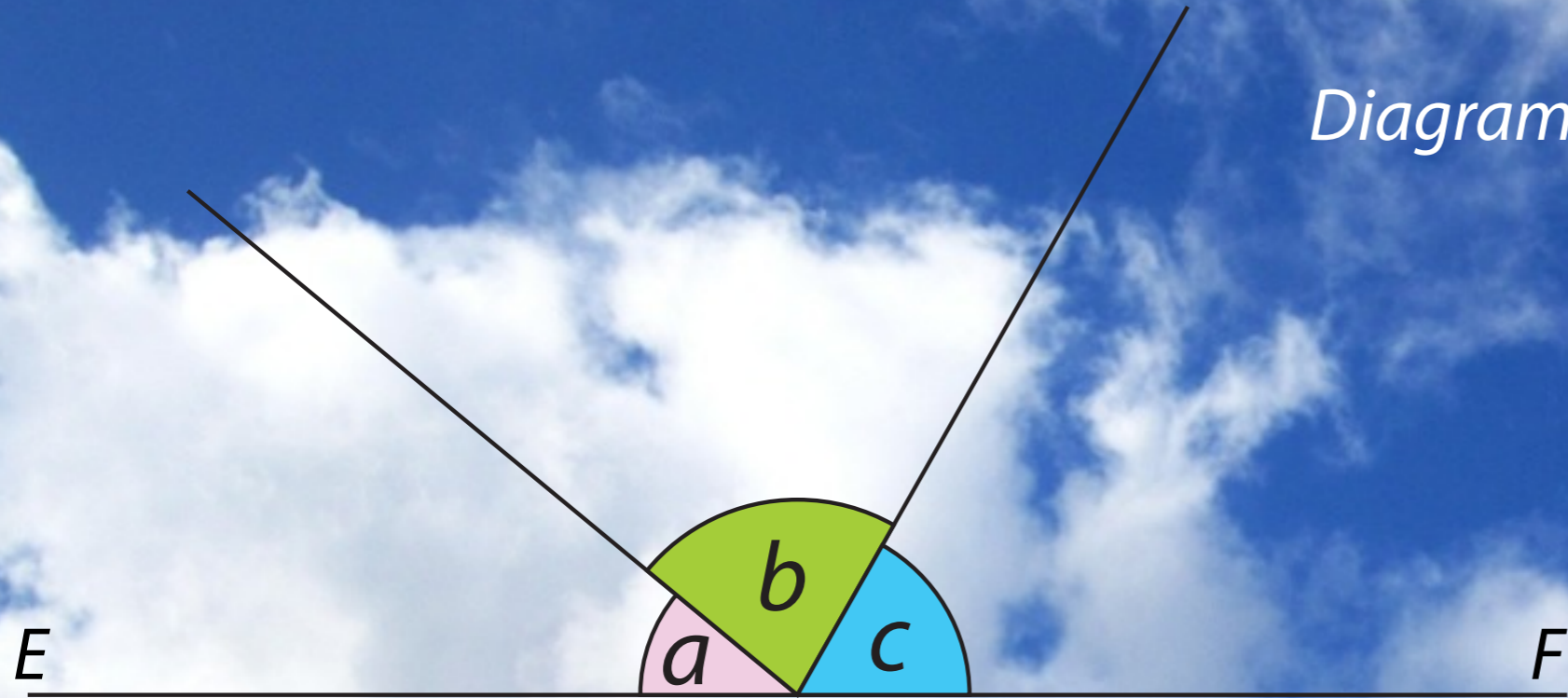
$$30^\circ, 90^\circ, 60^\circ$$

Answer



f1 EF is a straight line.

Diagram not to scale.

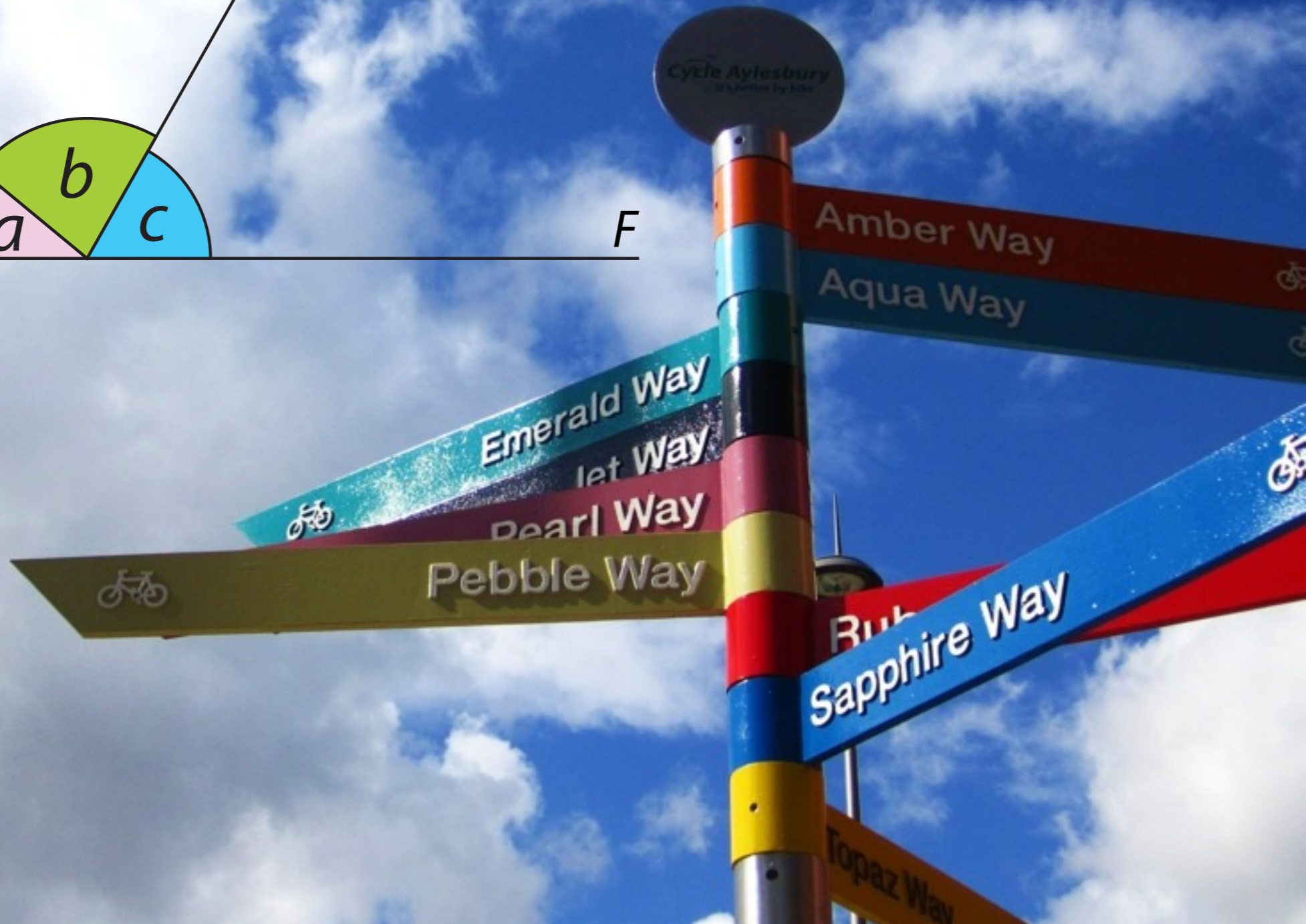


$b = 2a$

$a + b + c = 180^\circ$

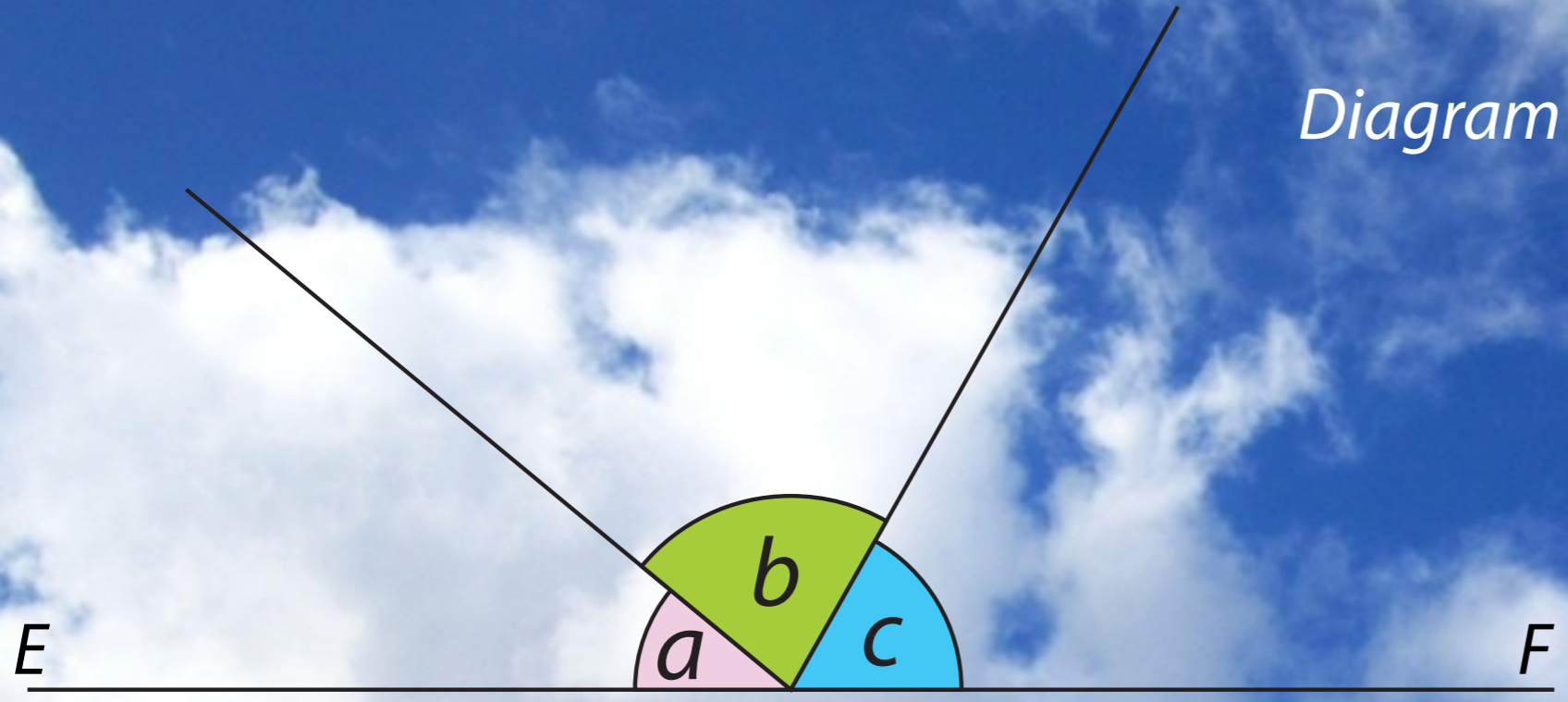
Continue the table.

a	b	c
20°	40°	120°



f1 EF is a straight line.

Diagram not to scale.



$b = 2a$

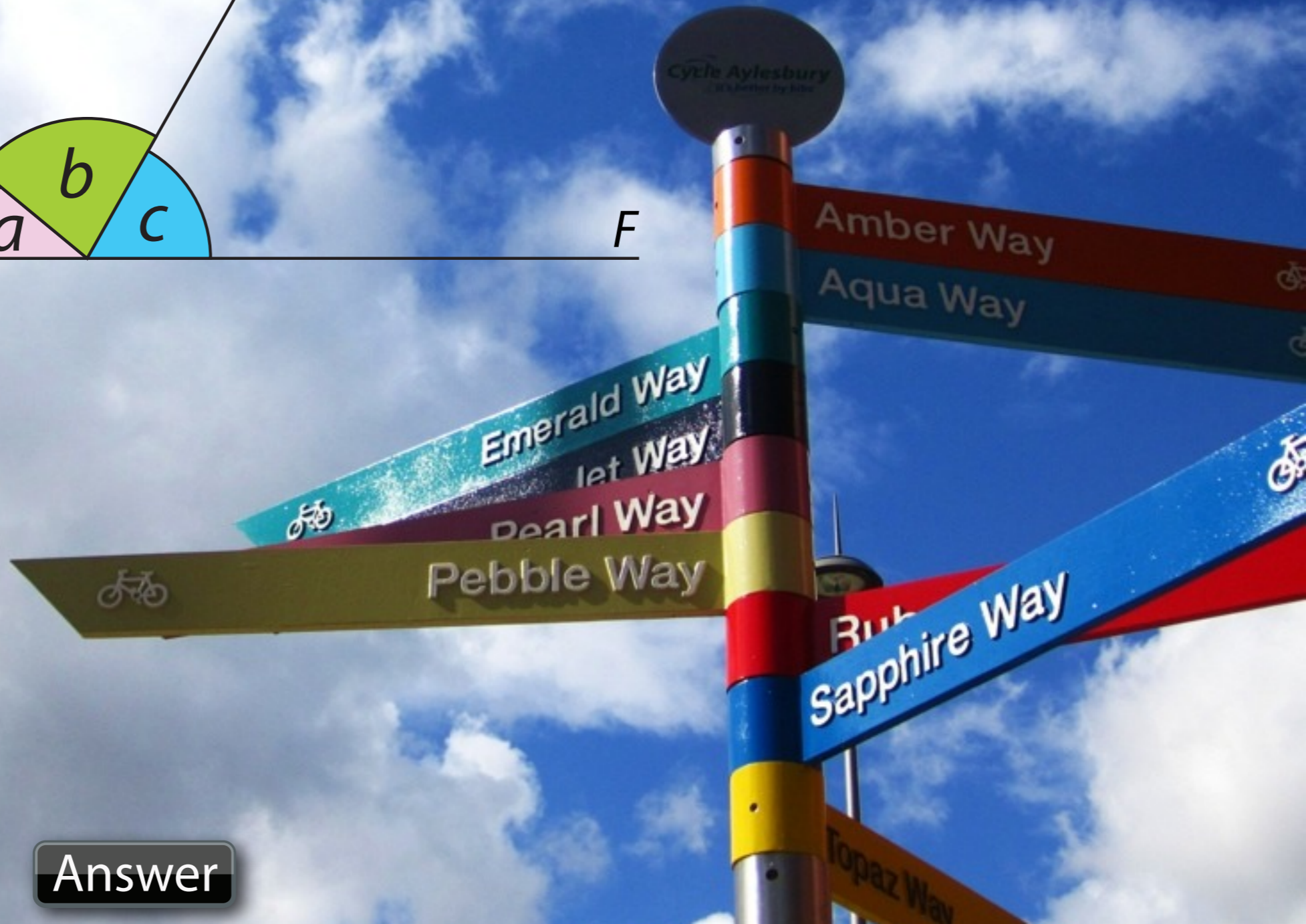
$a + b + c = 180^\circ$

Continue the table.

a	b	c
20°	40°	120°
40°	80°	60°
50°	100°	30°

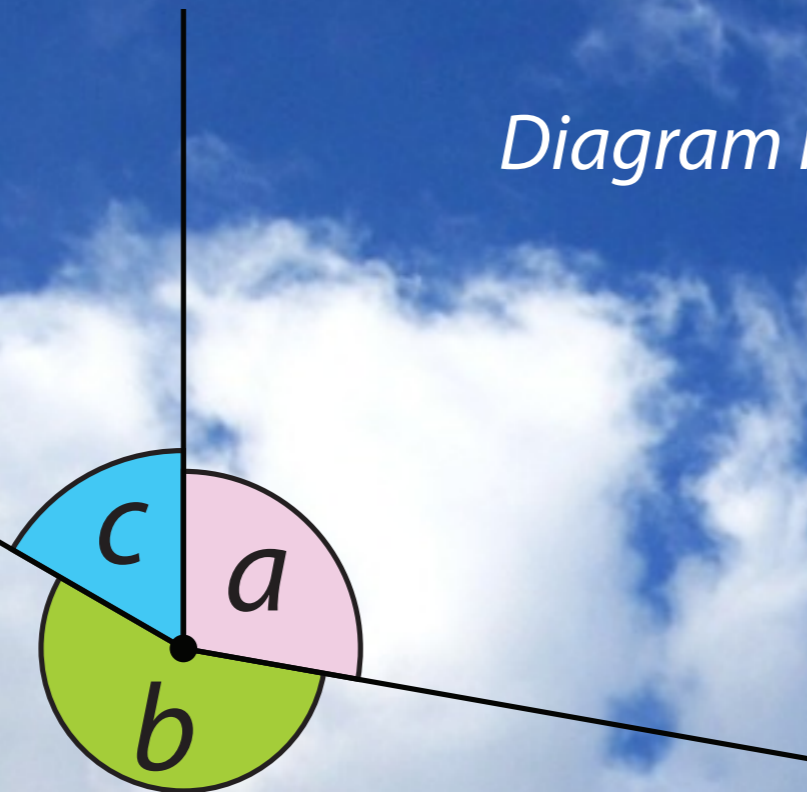
and many others.

Answer



f2 Look at the diagram.

Diagram not to scale.



$b = 2a$

$a + b + c = 360^\circ$

a Continue the table.

a	b	c
50°	100°	210°

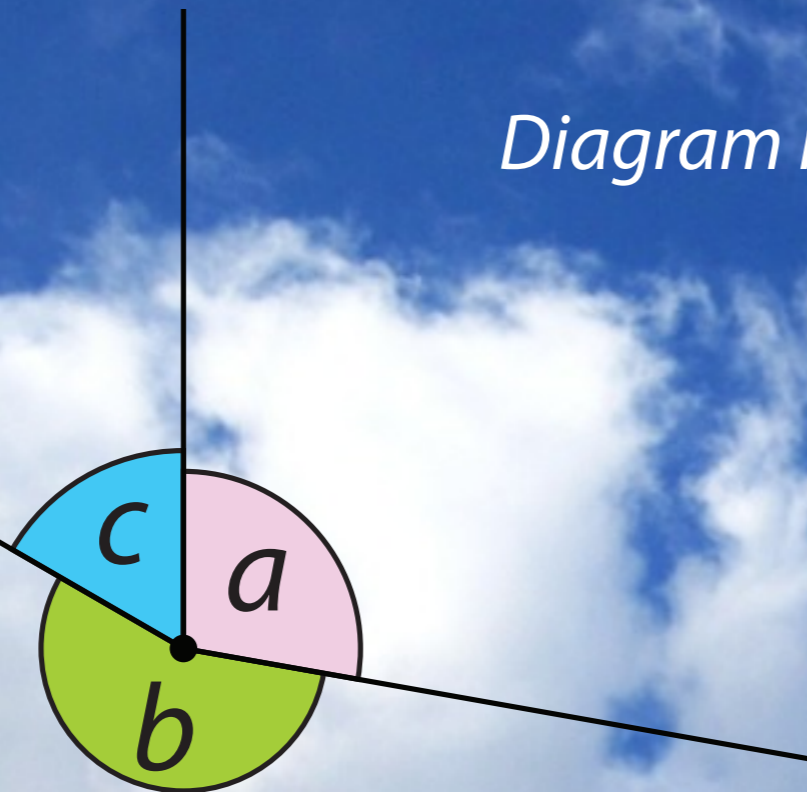
b What is the maximum value for a ?

$\bar{\uparrow}$ maximum



f2 Look at the diagram.

Diagram not to scale.



$$b = 2a$$

$$a + b + c = 360^\circ$$

a Continue the table.

a	b	c
50°	100°	210°
80°	160°	120°
100°	200°	60°

b What is the maximum value for a ?

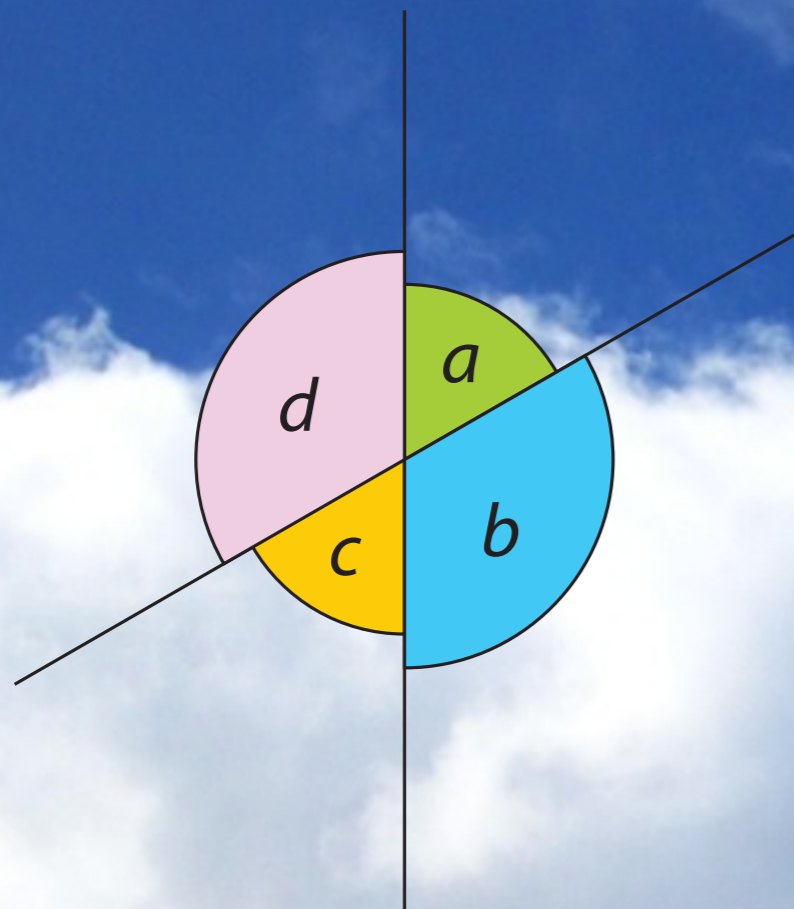
\uparrow maximum

$$a = 120^\circ \quad b = 240^\circ \quad c = 0^\circ$$



f3

Look at the diagram.



$$a + b + c + d = 360^\circ$$

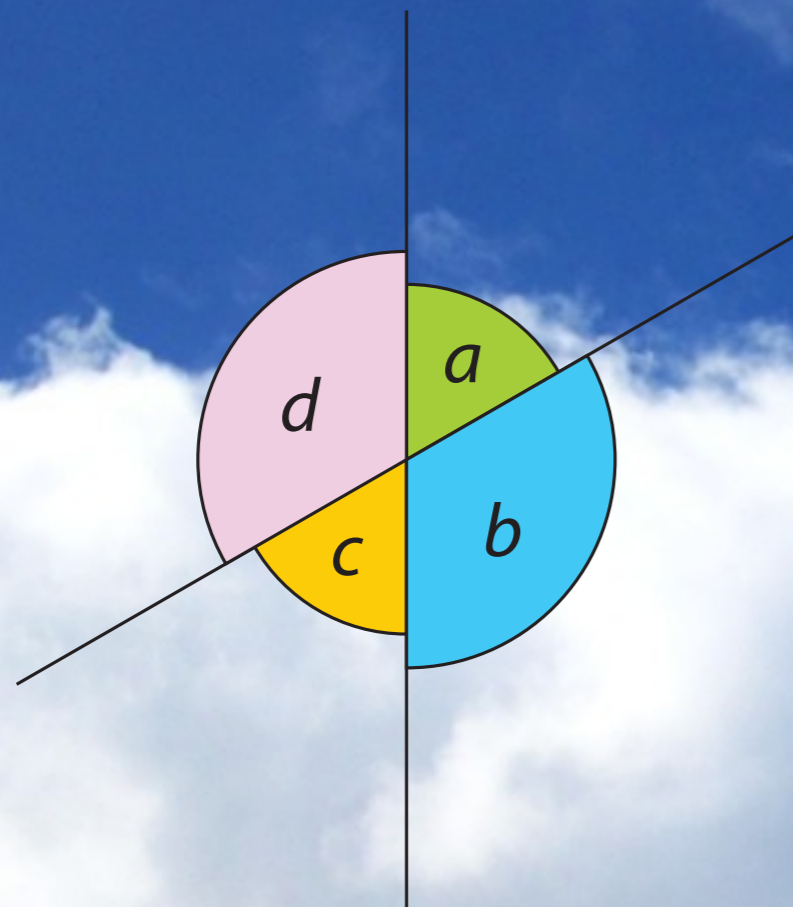
Continue the table

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
50°	130°	50°	130°



f3

Look at the diagram.



$$a + b + c + d = 360^\circ$$

Continue the table

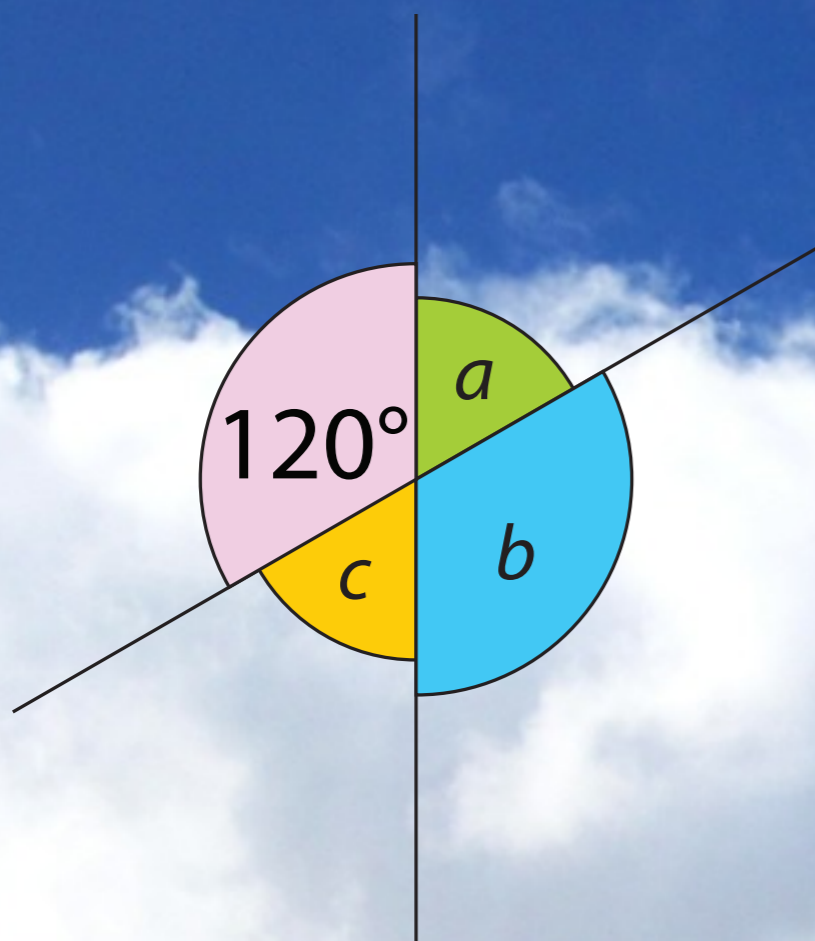
a	b	c	d
50°	130°	50°	130°
10°	170°	10°	170°
60°	120°	60°	120°
40°	120°	40°	120°

Answer



ev

Look at the diagram.

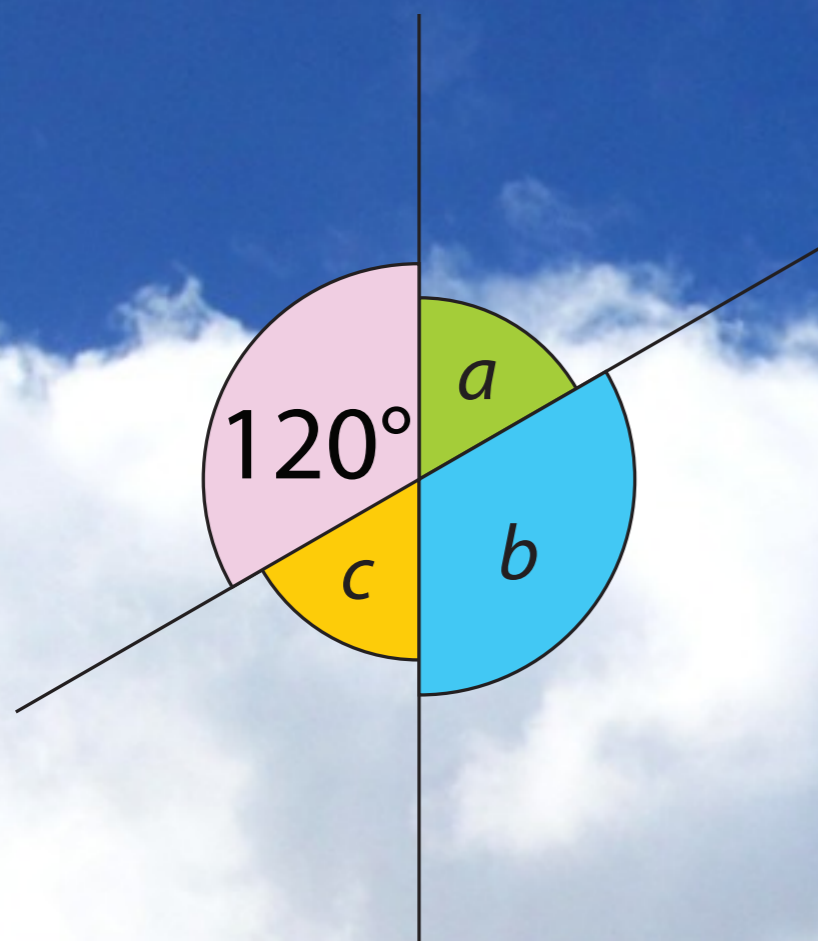


Calculate a , b , and c .



ev

Look at the diagram.



Calculate a , b , and c .

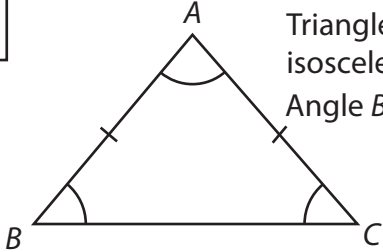
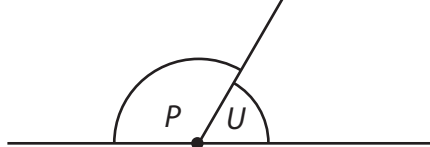
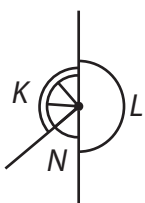

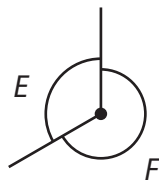
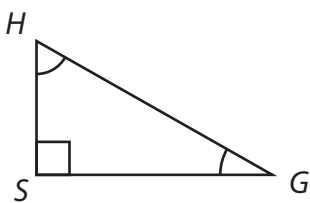
Answer

$$a = 60^\circ \quad b = 120^\circ \quad c = 60^\circ$$



ex S1.1 Angles

- Cut out the cards below.
- Solve the problem using the information on the cards.

<p>1 When you have worked out all of the angles then you will be able to de-code this message:</p> <p>80°, 45°, 30°, 180°, 120°, 90° 80°, 20°, 120°, 240°, 61°, 45°.</p>	<p>2 Calculate the values of each of the angles.</p> <p>Keep a record of the value of each angle e.g.</p> <p>Angle $P = 119^\circ$</p>
<p>3</p>  <p>Triangle ABC is isosceles. Angle B is 50°</p>	<p>4</p> <p>You are given some diagrams. Information for a diagram is sometimes on more than one card.</p>
<p>5</p> <p>Angle Q is 8 times the size of angle R.</p>	<p>6</p>  <p>Angles P and U are on a straight line.</p>
<p>7</p>  <p>Angle L is 180° Angle K is three times the size of angle N.</p>	<p>8</p> 
<p>9</p>  <p>Angle F is twice the size of angle E.</p>	<p>10</p> 
<p>11</p> <p>Angles Q and R are on a straight line.</p>	<p>12</p> <p>Triangle GHS is scalene.</p> <p>Angle H is twice the size of angle G.</p>