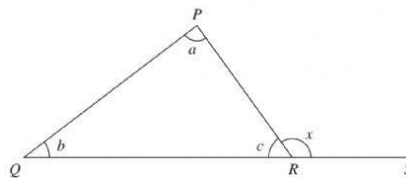


9.2 Properties of triangles and the interior and exterior angles of triangles

A. Based on the diagram, fill in the boxes with the correct answers.

SP9.2.2 TP3



1. State the interior angles of triangle PQR. , ,

2. State the exterior angle of c.

3. What is the sum of $a + b + c$? °

4. What is the sum of $c + x$? °

5. Write down the connection between an exterior angle and its interior opposite angles. $x =$

B. Find the value of x in each of the following triangles.

SP9.2.2 TP3

CONTOH

(a)

$$x + 53^\circ + 83^\circ = 180^\circ$$

$$x = 180^\circ - 136^\circ$$

$$= 44^\circ$$

(b)

$$x + 78^\circ = 140^\circ$$

$$x = 140^\circ - 78^\circ$$

$$= 62^\circ$$

1.

$$x =$$

2.

$$x =$$

3.

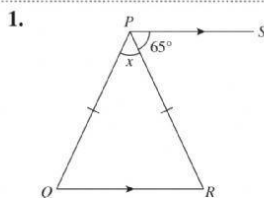
$$x =$$

4.

$$x =$$

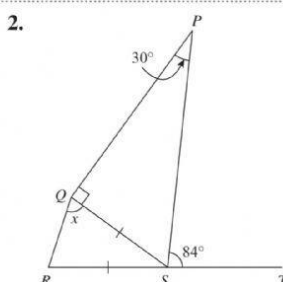
Solve the following problems.

SP9.2.3 TP4



In the diagram, PQR is an isosceles triangle. PS and QR are parallel lines. Find the value of x .

$$\begin{aligned} \angle PRQ &= \angle SPR = 65^\circ \\ \angle PQR &= \angle PRQ = 65^\circ \\ x + 65^\circ + 65^\circ &= 180^\circ \\ x &= 180^\circ - 130^\circ \\ x &= 50^\circ \end{aligned}$$



In the diagram, PQS is a right-angled triangle. QRS is an isosceles triangle and RST is a straight line. Find the value of x .

$$\begin{aligned} \angle QSP &= 180^\circ - 90^\circ - 30^\circ \\ &= 60^\circ \\ \angle QSR &= 180^\circ - 84^\circ \\ &= 96^\circ \\ x &= \frac{180^\circ - 96^\circ}{2} \\ x &= 42^\circ \end{aligned}$$