

Name: _____ () Class: _____ Date: _____

Lesson Worksheet 8.1A(I)

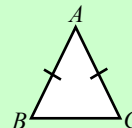
Objective: To solve questions involving isosceles triangles.

For any isosceles triangle ABC with $AB = BC$, we have the following properties.

1. The base angles are equal.

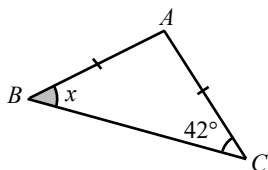
i.e. $\angle B = \angle C$

[Reference: *base \angle s, isos. \triangle*]

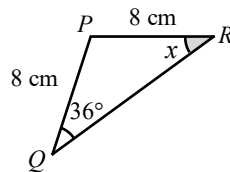


1. In each of the following, find x .

(a)

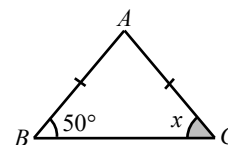


(b)



Demonstration

Find x in the figure.



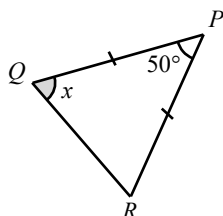
Solution

In $\triangle ABC$,

$\therefore AB = AC$ (given)

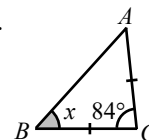
$\therefore x = \underline{50^\circ}$ (base \angle s, isos. \triangle)

2. Find x in the figure.



Demonstration

Find x in the figure.



Solution

In $\triangle ABC$,

$\therefore CA = CB$ (given)

$\therefore \angle CAB = x$ (base \angle s, isos. \triangle)

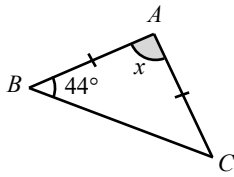
$x + \angle CAB + 84^\circ = 180^\circ$
(\angle sum of \triangle)

$x + x + 84^\circ = 180^\circ$

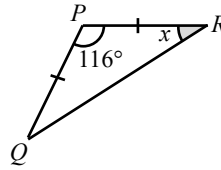
$x = 48^\circ$

3. In each of the following, find x .

(a)

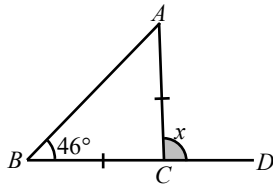


(b)

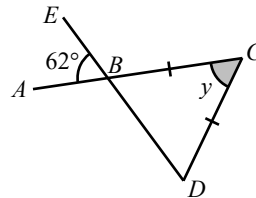


4. In each of the following, find the unknown.

(a) BCD is a straight line.

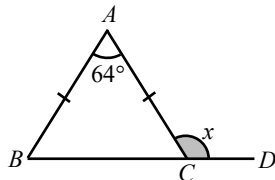


(b) ABC and DBE are straight lines.



5. In each of the following, find the unknown.

(a) BCD is a straight line.



(b) RST is a straight line.

