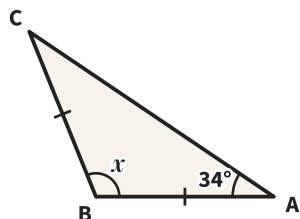


Angles in Isosceles Triangles

ANSWERS

1

Find the size of angle x .



Not drawn accurately

$$AB = BC, \text{ so angle } BCA = 34^\circ$$

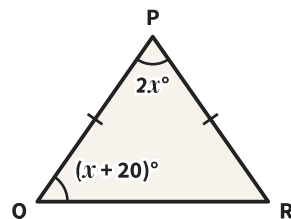
$$180 - 34 - 34 = 112$$

$$x = 112^\circ$$

Answer

2

Find the value of x .



Not drawn accurately

$$\text{angle } R = (x + 20)^\circ \text{ too}$$

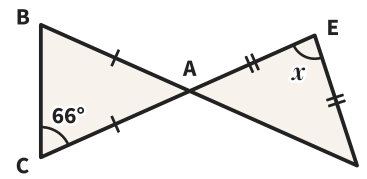
$$2x + 2(x + 20) = 180, 4x = 140$$

$$x = 35$$

Answer

3

BAD and CAE are straight lines.
Find the size of angle x .



Not drawn accurately

$$BAC = DAE = 180 - 66 - 66 = 48^\circ$$

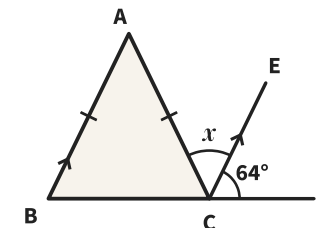
$$EA = ED: ADE = 48^\circ, 180 - 96 = 84$$

$$x = 84^\circ$$

Answer

4

BCD is a straight line. Find the size of angle x .



Not drawn accurately

$$ABC = 64^\circ \text{ (corresponding)} = ACB$$

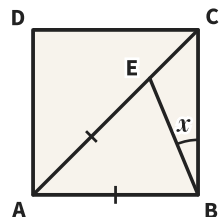
$$BAC = 52^\circ = x \text{ (alternate)}$$

$$x = 52^\circ$$

Answer

5

ABCD is a square and E is on its diagonal AC. Find the size of angle x .



Not drawn accurately

$$BAE = 45^\circ, ABE = (180 - 45) \div 2 = 67.5^\circ$$

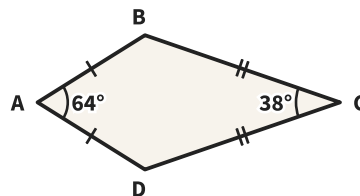
$$90 - 67.5 = 22.5$$

$$x = 22.5^\circ$$

Answer

6

Find the size of angle ABC.



Not drawn accurately

$$\text{join } BD: ABD = (180 - 64) \div 2 = 58^\circ$$

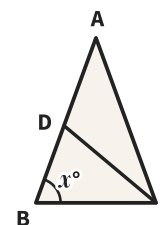
$$CBD = (180 - 38) \div 2 = 71^\circ, 58 + 71$$

$$\text{angle } ABC = 129^\circ$$

Answer

7

D is on AB. $AB = AC$ and $CD = CB$.
Show that angle $ACD = (3x - 180)^\circ$.



Not drawn accurately

$$ACB = x^\circ, \text{ so } CDB = x^\circ, DCB = 180 - 2x$$

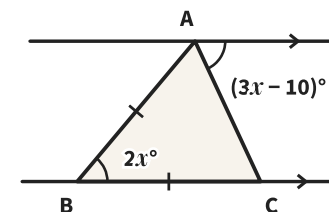
$$ACD = x - (180 - 2x) = 3x - 180$$

$$\text{angle } ACD = (3x - 180)^\circ$$

Shown

8

Find the value of x .



Not drawn accurately

$$ACB = (3x - 10)^\circ \text{ (alternate)} = BAC$$

$$2x + 2(3x - 10) = 180, 8x = 200$$

$$x = 25$$

Answer