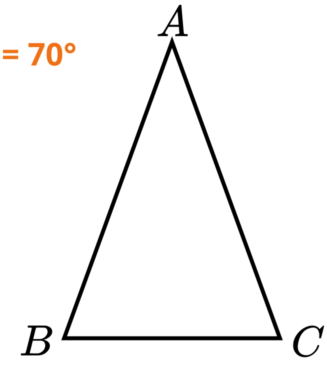
Day3

Think Academy Online Campus

Triangle

Given that AB = AC and m∠A = 40°, m∠B = 70 °.

m∠B = (180° - m∠A) ÷ 2 = 70°



Given that AB = AC and m∠ABD = m∠CBD = 35°, m∠BDC = 75 °.

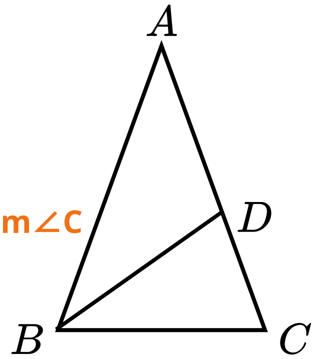
m∠C = m∠ABC

= m∠ABD + m∠CBD

= 70°

m∠BDC = 180° - m∠CBD - m∠C

= 75°



An isosceles triangle has two equal sides of 6 cm each and a base of 5 cm. Its perimeter is 17 cm.

6 + 6 + 5 = 17

The perimeter of an equilateral triangle is 6 cm. The length of each side is 2 cm.

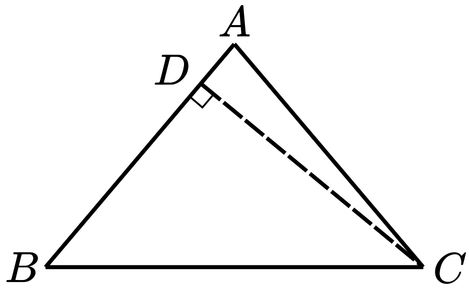
6 ÷ 3 = 2

In △ABC shown in the figure, AB = AC. Point D lies on side AB, such that CD⊥AB. Given that m∠DCB = 40°, m∠A = 80 °.

m∠B = 180° - m∠BDC - m∠DCB = 50°

AB=AC 👉 m∠ACB = m∠B = 50°

m∠A = 180 - m∠B - m∠ACB = 80°



As shown in the figure, △ABC is an equilateral triangle, D is the midpoint of BC, and AC = CE.

(1) m∠BAE = 90 °.

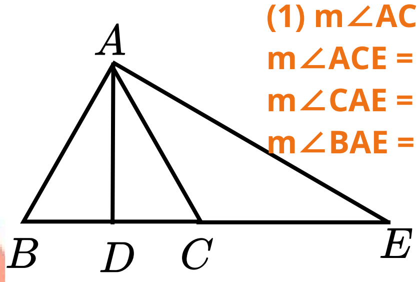
(2) Given that AB = 2 cm, DE = 3 cm.

(1) m∠ACB = m∠BAC = m∠ABC = 60°

m∠ACE = 180° - m∠ACB = 120°

m∠CAE = (180° - m∠ACE) ÷ 2 = 30°

m∠BAE = m∠BAC + m∠CAE = 90°



(2) AB=AC=BC

CD = ½ BC = ½ AB = 1 cm

CE = AC = AB = 2 cm

DE = CD + CE = 3cm

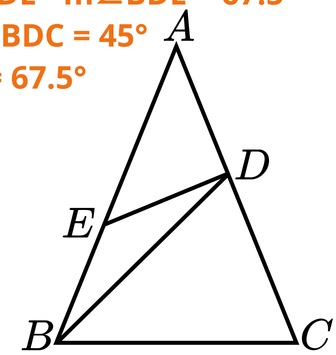
As shown in the figure, in △ABC, points D and E lie on sides AC and AB, respectively. BE = DE, BD = BC, and m∠ADE = 90°. Given that m∠DBE = 22.5°, m∠ABC = 67.5 °.

m∠BDE = m∠DBE = 22.5°

m∠BDC = 180° - m∠ADE - m∠BDE = 67.5°

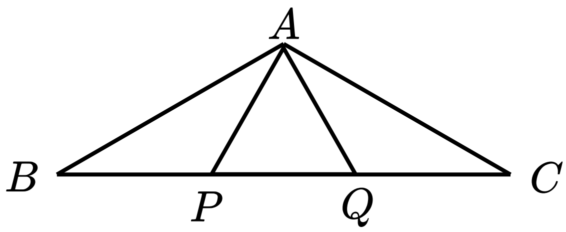
m∠CBD = 180° - 2 m∠BDC = 45°

m∠ABC = 22.5° + 45° = 67.5°



🤔 Challenge

As shown in the figure, points P and Q lie on side BC. Given that AP = AQ = BP = PQ = QC, m∠BAC = 120 °.



m∠PAQ = m∠APQ = m∠AQP = 60°

m∠APB = 180° - m∠APQ = 120°

m∠PAB = (180° - m∠APB) ÷ 2 = 30°

m∠AQC = 180° - m∠AQP = 120°

m∠CAQ = (180° - m∠AQC) ÷ 2 = 30°

m∠BAC = m∠PAB + m∠CAQ + m∠PAQ = 120°

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PreA Teacher Claire Xiong

Passionate & Responsible