DO NOW

If the degree measures of three angles of a triangle are represented by $x + 20$, $5x + 50$, and $9x - 40$, find the degree measure of each angle. Is the triangle acute, obtuse, right or equilateral?

3 acute ∠'s one rt ∠ 3 equal ∠'s

$x+20+5x+50+9x-40=180$

$15x+30=180$

$15x=150$

$x=10$

30°, 50°, 100°

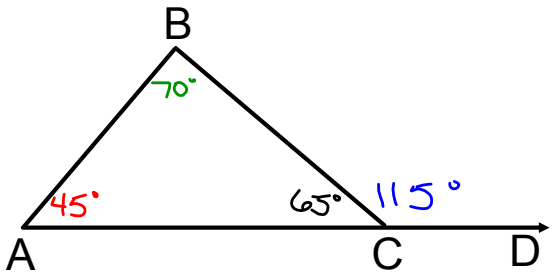
Obtuse △

Oct 1-7:45 AM

Exterior Angle of a Triangle Theorem

The exterior angle of a triangle is equal to the sum of the two nonadjacent interior angles of the triangle

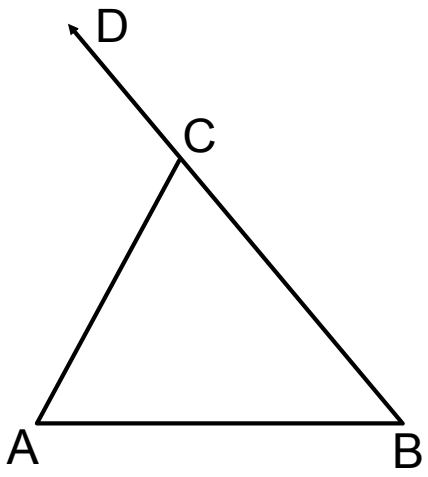
(remote)



$m\angle A + m\angle B = m\angle BCD$

Oct 1-7:47 AM

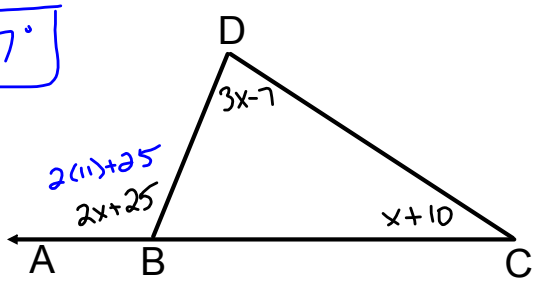
If m∠A = 40 and m∠B = 20, find m∠ACD



Oct 1-7:49 AM

If m∠C = x + 10, m∠D = 3x - 7 and m∠ABD = 2x + 25, find the measure of ∠ABD

m∠ABD = 47°



$2x+25 = 3x-7+x+10$

$2x+25 = 4x+3$

$22 = 2x$

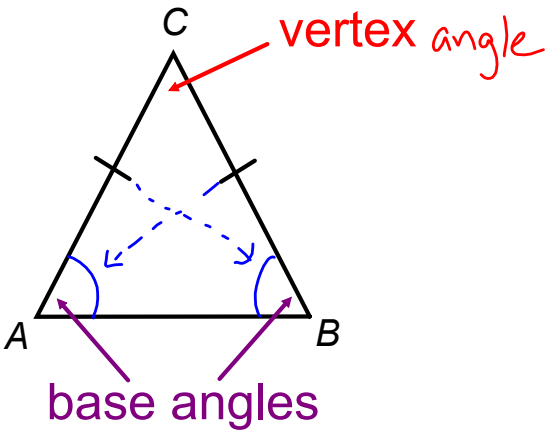
$11 = x$

Oct 4-11:54 AM

Isosceles Triangle Theorem

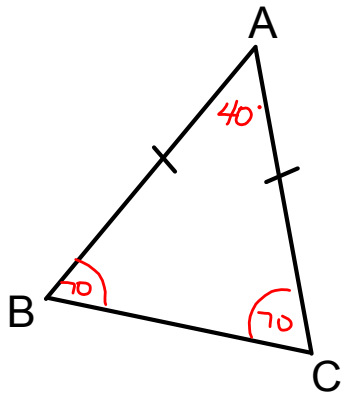
If two sides of a triangle are congruent, the angles opposite those sides are congruent

If $\overline{AC} \cong \overline{BC}$, then $\angle A \cong \angle B$



Nov 8-11:00 AM

If m∠A = 40, find m ∠B

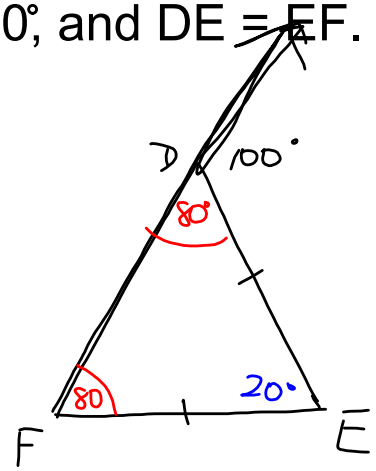


m∠B = 70°

180 - 40 = 140

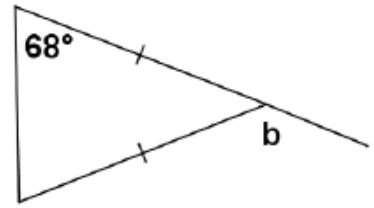
Oct 4-11:48 AM

The exterior angle at D of isosceles ΔDEF is 100°, and DE = EF. Find the measure of ∠E

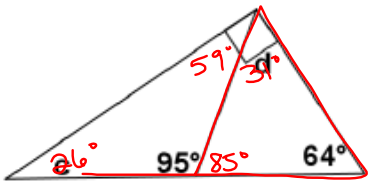


m∠E = 20°

Sep 14-8:26 AM



$m\angle b =$ _____



$m\angle c =$ 26°

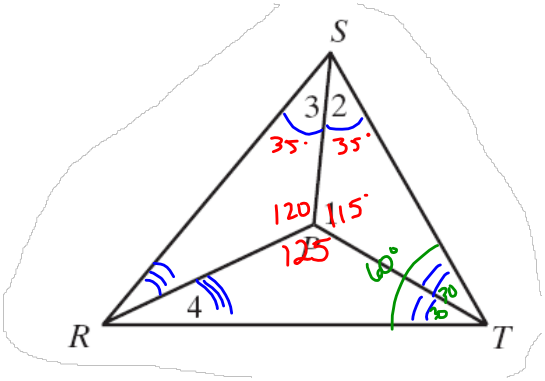
$m\angle d =$ 31°

180
- 149
31°

180
-154
26

Sep 14-8:21 AM

In $\triangle RST$, the bisectors of the angles meet at point P. If $m\angle RTS = 60$, $m\angle RPT = 125$, and $m\angle RPS = 120$, find the degree measures of the angles numbered 1 to 4.



$m\angle 1 = 115°$

$m\angle 2 = 35°$

$m\angle 3 = 35°$

$m\angle 4 = 25°$

Oct 24-12:52 PM