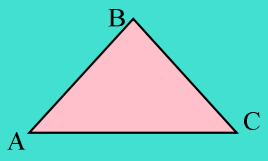
Ch 4.2 Angles Measures of a Triangle

Activity: Tear the corners off a triangle

Triangle Sum Theorem: The sum of the measures of a triangle = 180^0.

$\triangle$ ABC, $m\angle A + m\angle B + m\angle C = 180^0$



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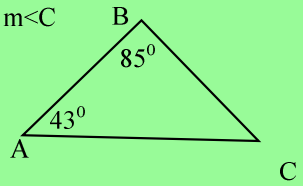
Ex1) find m<C



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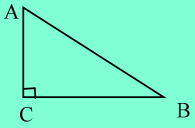
Corollary - is a statement that can be proven easily using a theorem.

Corollary to the Triangle Sum Theorem:
The acute angles of a right triangle are complementary.



$m\angle A + m\angle B + m\angle C = 180^0$

$m\angle A + m\angle B + 90 = 180^0$

$m\angle A + m\angle B = 90^0$

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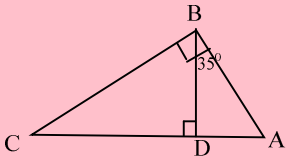
Ex2a) Find the m<DAB.



b) Find the m< BCD

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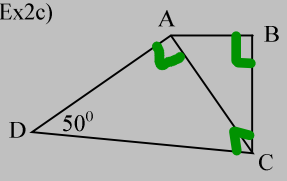
Ex2c)



Find the m< ACD

Find the m< BCA

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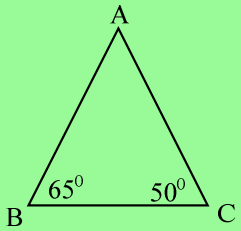
1 1. Find m<A.



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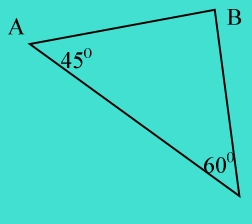
2 2. Find m<B.



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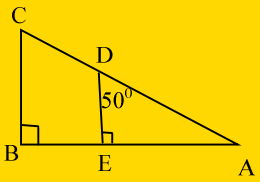
3 3. Find m<C.



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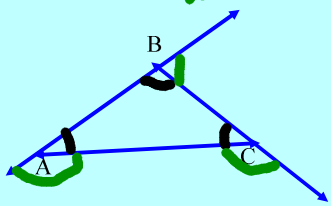
Interior Angles - the inside angles of the triangle.

Exterior Angles - the angles that are adjacent to the interior angles of a triangle.



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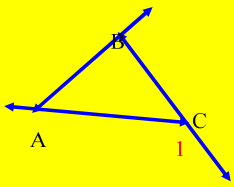
Exterior Angle Theorem: The measure of the exterior angle is = to the sum of the 2 nonadjacent interior angles.



m<A + m<B + m<ACB = 180

m<1 + m<ACB = 180

m<A + m<B + m<ACB = m<1 + m<ACB

m<A + m<B = m<1

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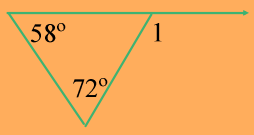
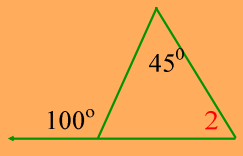
Ex3a) find the m<1=



Exb)find the m<2



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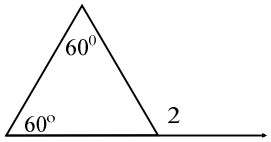
1 1. Find the m<2



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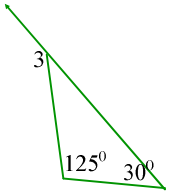
2 2. Find the m<3



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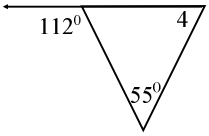
3 3. find m<4



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