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Elizabeth Gibbons

Objective: Do Now: What are the three types of triangles classified by SIDE LENGTH What are the three types of triangles classified by ANGLE What do the interior angles of a triangle add to? Can a triangle be both right and isosceles? (Draw a diagram) Can a

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**Objective:**

**Do Now:**

1. What are the three types of triangles classified by SIDE LENGTH
2. What are the three types of triangles classified by ANGLE
3. What do the interior angles of a triangle add to?
4. Can a triangle be both right and isosceles? (Draw a diagram)
5. Can a triangle be both right and obtuse? (Draw a diagram)
6. Can a triangle be both right and equilateral? (Draw a diagram)

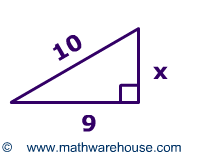
**The Pythagorean Theorem:**

If a triangle is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, its side lengths must satisfy the equation

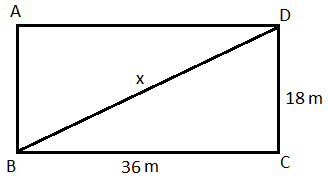
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Use the pythagorean theorem to find the missing side length:



Ex 1. Ex 2.



The **Converse** to the Pythagorean Theorem:

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Ex 3  Verify that the triangle with the given side lengths is a right triangle: 16, 63, and 65

Ex 4  Verify that the triangle with the given vertices is a right triangle (-3, 9), (5, 9), (-3, -8)

Pythagorean Triple –

Decide whether the numbers form a Pythagorean Triple

|  |  |  |  |
| --- | --- | --- | --- |
| ( 3, 4, 5 ) | (7, 12, 15) ( 5, 12, 13) | ( 8, 15, 17) | (13, 22, 26) ( 7, 24, 25) |