

9.3 Converse to the
Pythagorean Theorem

Pythagorean Thm

If rt Δ then $a^2 + b^2 = c^2$

Converse

If $a^2 + b^2 = c^2$ then it's a rt Δ

$$7, 8, \sqrt{113}$$

$$7^2 + 8^2 = (\sqrt{113})^2$$

$$49 + 64 = 113$$

$$113 = 113$$

$$9, 20, 21$$

$$9^2 + 20^2 = 21^2$$

$$81 + 400 = 481$$

$$481 \neq 441$$

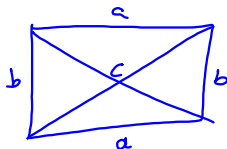
Acute

Acute, Obtuse

If $a^2 + b^2 = c^2$ then Rt Δ

If $a^2 + b^2 > c^2$ then acute Δ

If $a^2 + b^2 < c^2$ then obtuse Δ



measuring
square

Diagonals are =

$$a^2 + b^2 = c^2$$

P 545-547

2-34 even