Explorations and Activities Exercise

Def. A triple (a, b, c) is a Pythagorean Triple provided $(a, b, c) \in \mathbb{N}^3$ with $a < b < c$ and $a^2 + b^2 = c^2$. §1.2 p29

Def. Three natural numbers are called consecutive natural numbers if they can be written in the form m, $m + 1$, and $m + 2$ for some $m \in \mathbb{N}$. §3.1 p102

1. State a theorem about Pythagorean triples of consecutive natural numbers that includes how many Pythagorean triples of consecutive natural numbers exists and what the triples are.
2. Prove your theorem.

Hint. In your *thinking land*, find all Pythagorean triples consisting of 3 consecutive natural numbers.

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DELETE this whole sentence and THEN put your answer to ALL parts down here.