MODUS PONENS

*Modus ponendo ponens* (the way that affirms by affirming, mode that affirms, lat.) or the *law of detachment* is a rule of inference, a method of proof.

From $P$ and $P \rightarrow Q$ one concludes $Q$.

In words,

If $P$, then $Q$.

$P$ is true.

Therefore $Q$ is true.

In summertime fish are jumping and the cotton is high.

It’s summertime.

So fish are jumping and the cotton is high.

In symbols,

$$P \rightarrow Q$$

$$P$$

$$\therefore Q$$

or

$$((P \rightarrow Q) \land P) \rightarrow Q$$

Note that the preceding compound proposition is a tautology.