

Answer on Question #54956, Physics / Astronomy | Astrophysics

By relation:

$$\frac{1}{S} = \frac{1}{T_1} - \frac{1}{T_2}$$

So that we have, since Venus is an inferior planet:

$$\frac{1}{583.9} = \frac{1}{T_1} - \frac{1}{365.25}$$

$$\frac{1}{T_1} = \frac{365.25 + 583.9}{583.9 \times 365.25}$$

$$T_1 = 224.7 \text{ days}$$

Answer: $T_1 = 224.7$ days

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