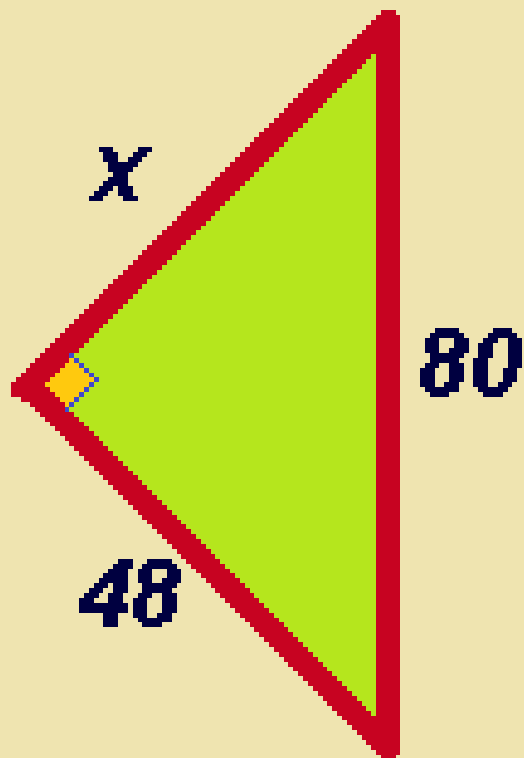


# Pythagorean theorem – examples

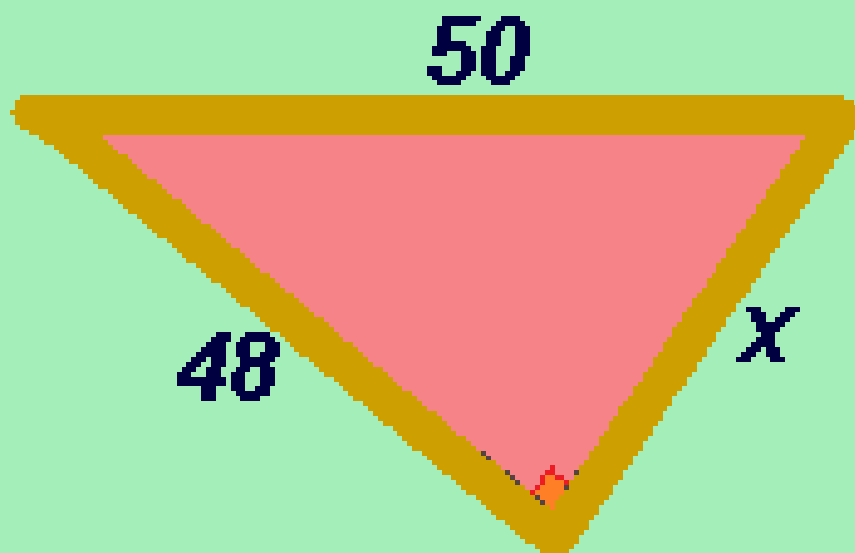
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 48^2 &= 80^2 \\x^2 + 2304 &= 6400 \\x^2 &= 6400 - 2304 \\x^2 &= 4096 \\x &= \sqrt{4096} \\x &= 64\end{aligned}$$

# Pythagorean theorem – examples

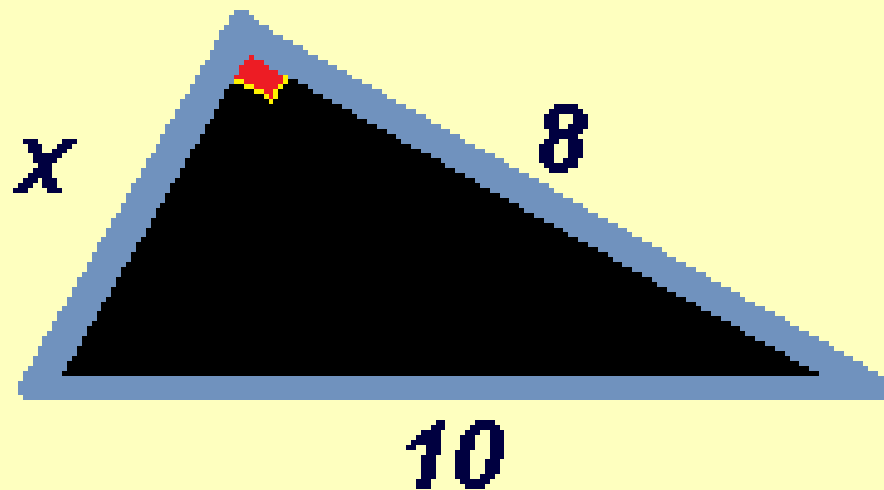
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 48^2 &= 50^2 \\x^2 + 2304 &= 2500 \\x^2 &= 2500 - 2304 \\x^2 &= 196 \\x &= \sqrt{196} \\x &= 14\end{aligned}$$

# Pythagorean theorem - examples

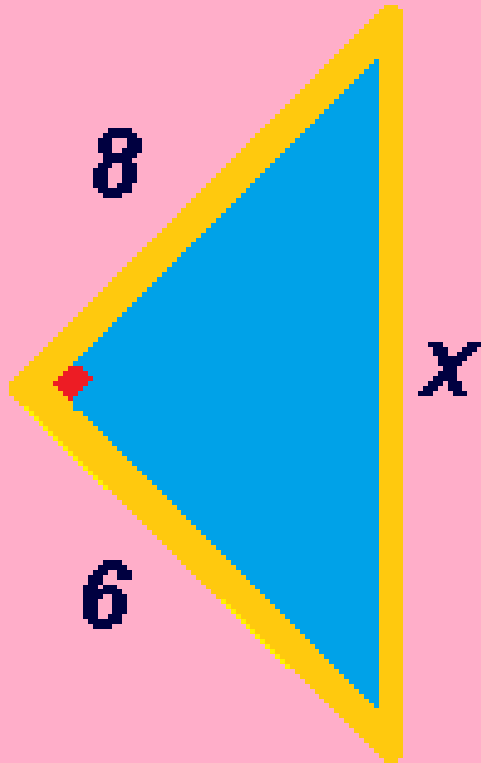
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 8^2 &= 10^2 \\x^2 + 64 &= 100 \\x^2 &= 100 - 64 \\x^2 &= 36 \\x &= \sqrt{36} \\x &= 6\end{aligned}$$

# Pythagorean theorem - examples

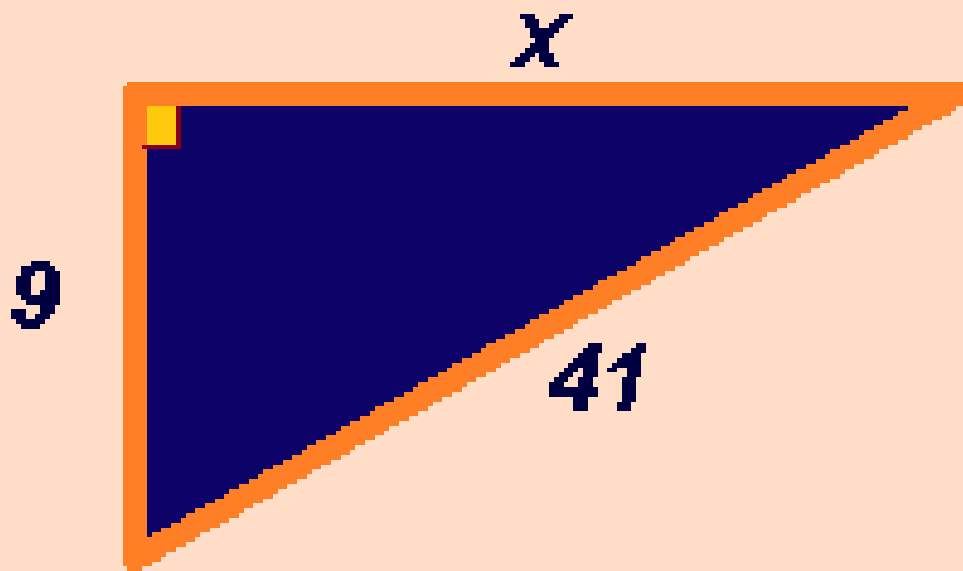
<http://sorinborodi.ro>



$$\begin{aligned}6^2 + 8^2 &= x^2 \\36 + 64 &= x^2 \\x^2 &= 36 + 64 \\x^2 &= 100 \\x &= \sqrt{100} \\x &= 10\end{aligned}$$

# Pythagorean theorem – examples

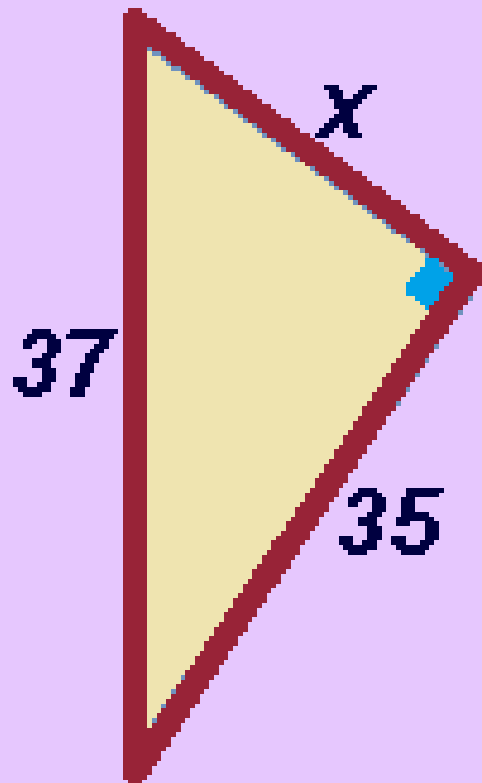
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 9^2 &= 41^2 \\x^2 + 81 &= 1681 \\x^2 &= 1681 - 81 \\x^2 &= 1600 \\x &= \sqrt{1600} \\x &= 40\end{aligned}$$

# Pythagorean theorem – examples

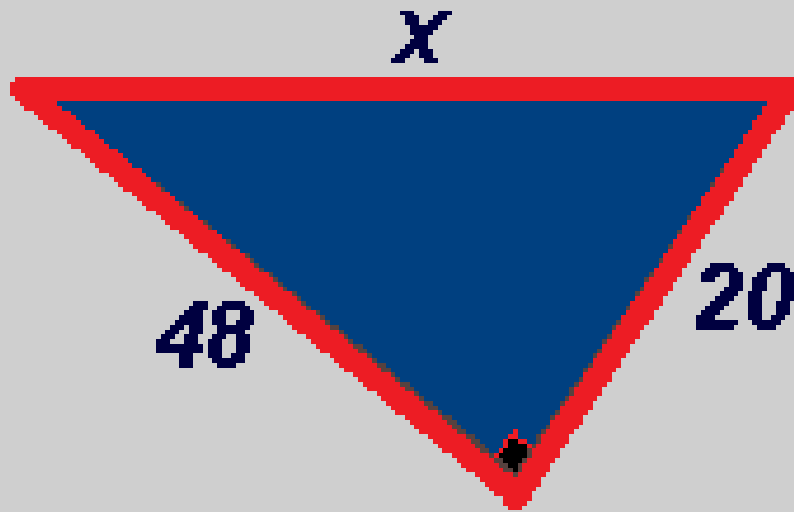
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 35^2 &= 37^2 \\x^2 + 1225 &= 1369 \\x^2 &= 1369 - 1225 \\x^2 &= 144 \\x &= \sqrt{144} \\x &= 12\end{aligned}$$

# Pythagorean theorem – examples

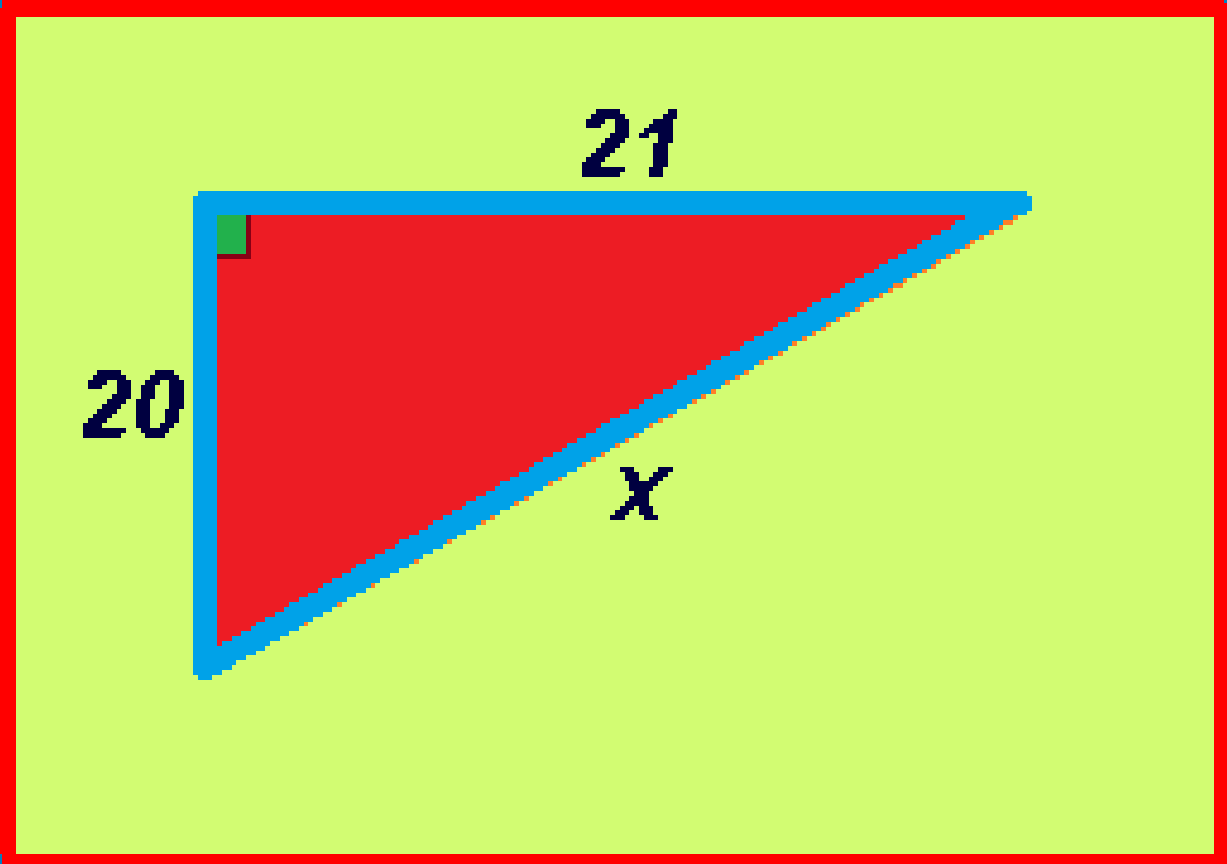
<http://sorinborodi.ro>



$$\begin{aligned}20^2 + 48^2 &= x^2 \\400 + 2304 &= x^2 \\x^2 &= 400 + 2304 \\x^2 &= 2704 \\x &= \sqrt{2704} \\x &= 52\end{aligned}$$

# Pythagorean theorem – examples

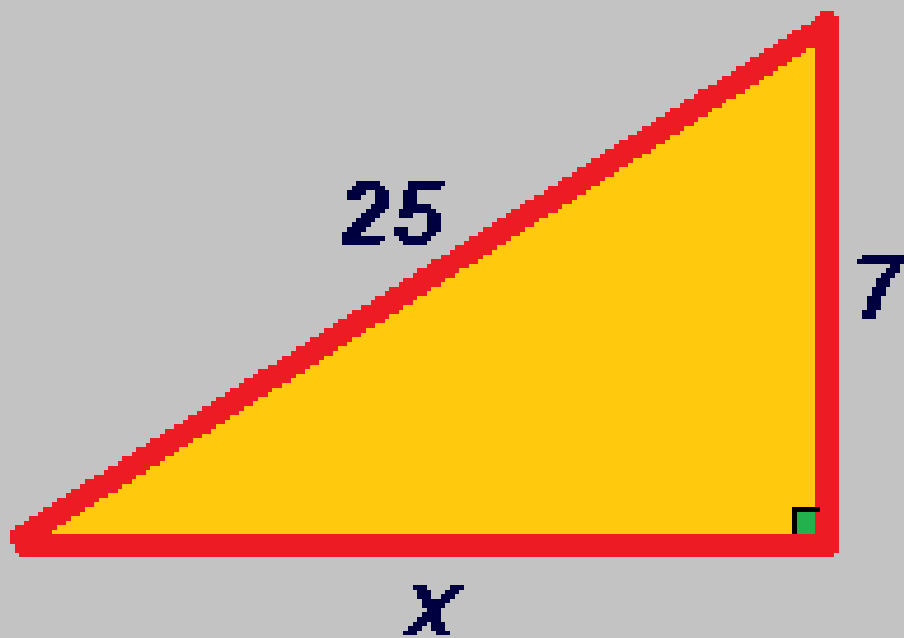
<http://sorinborodi.ro>


$$\begin{aligned}20^2 + 21^2 &= x^2 \\400 + 441 &= x^2 \\x^2 &= 400 + 441 \\x^2 &= 841 \\x &= \sqrt{841} \\x &= 29\end{aligned}$$



# Pythagorean theorem - examples

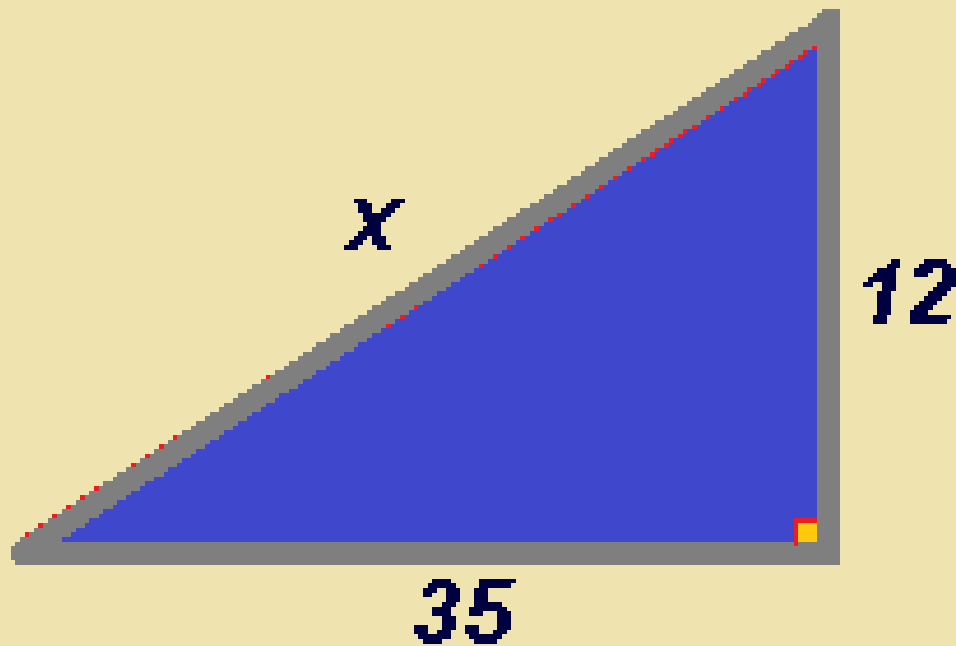
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 7^2 &= 25^2 \\x^2 + 49 &= 625 \\x^2 &= 625 - 49 \\x^2 &= 576 \\x &= \sqrt{576} \\x &= 24\end{aligned}$$

# Pythagorean theorem - examples

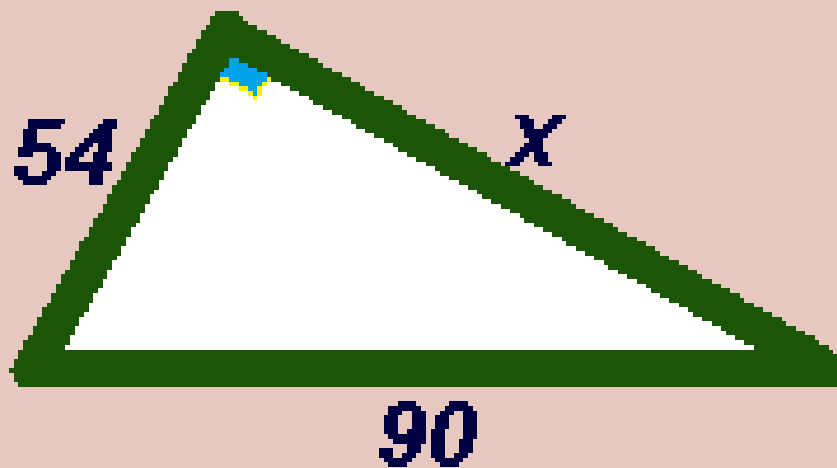
<http://sorinborodi.ro>



$$\begin{aligned}12^2 + 35^2 &= x^2 \\144 + 1225 &= x^2 \\x^2 &= 144 + 1225 \\x^2 &= 1369 \\x &= \sqrt{1369} \\x &= 37\end{aligned}$$

# Pythagorean theorem - examples

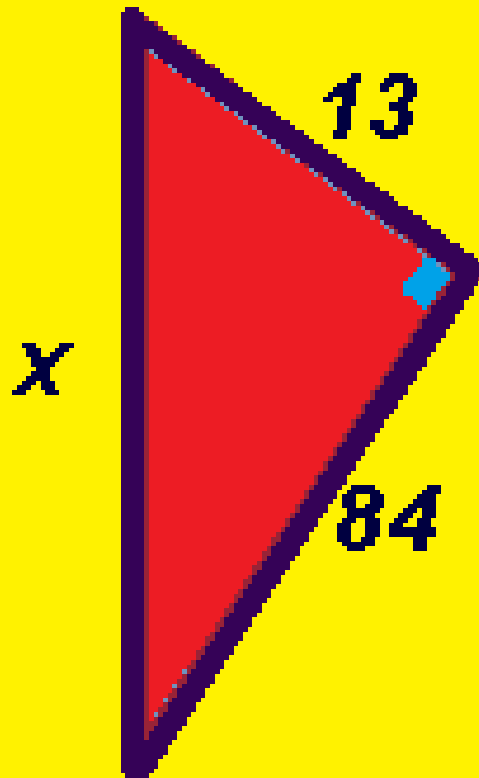
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 54^2 &= 90^2 \\x^2 + 2916 &= 8100 \\x^2 &= 8100 - 2916 \\x^2 &= 5184 \\x &= \sqrt{5184} \\x &= 72\end{aligned}$$

# Pythagorean theorem – examples

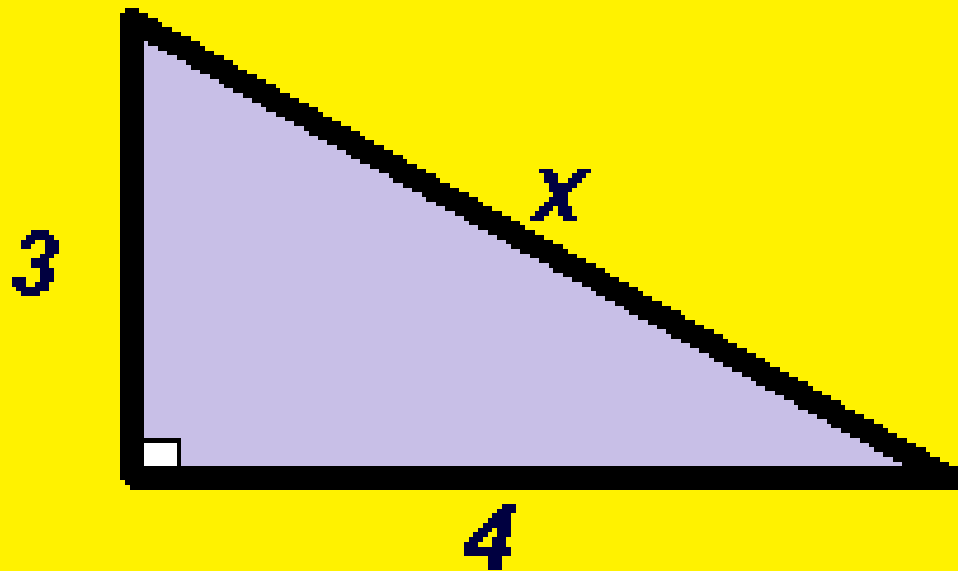
<http://sorinborodi.ro>



$$\begin{aligned}13^2 + 84^2 &= x^2 \\169 + 7056 &= x^2 \\x^2 &= 169 + 7056 \\x^2 &= 7225 \\x &= \sqrt{7225} \\x &= 85\end{aligned}$$

# Pythagorean theorem - examples

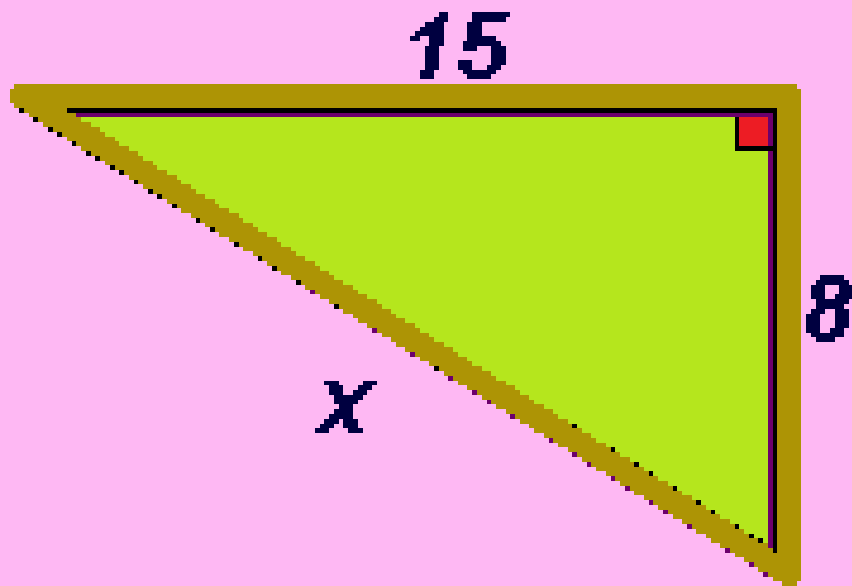
<http://sorinborodi.ro>



$$\begin{aligned}3^2 + 4^2 &= x^2 \\9 + 16 &= x^2 \\x^2 &= 9 + 16 \\x^2 &= 25 \\x &= \sqrt{25} \\x &= 5\end{aligned}$$

# Pythagorean theorem - examples

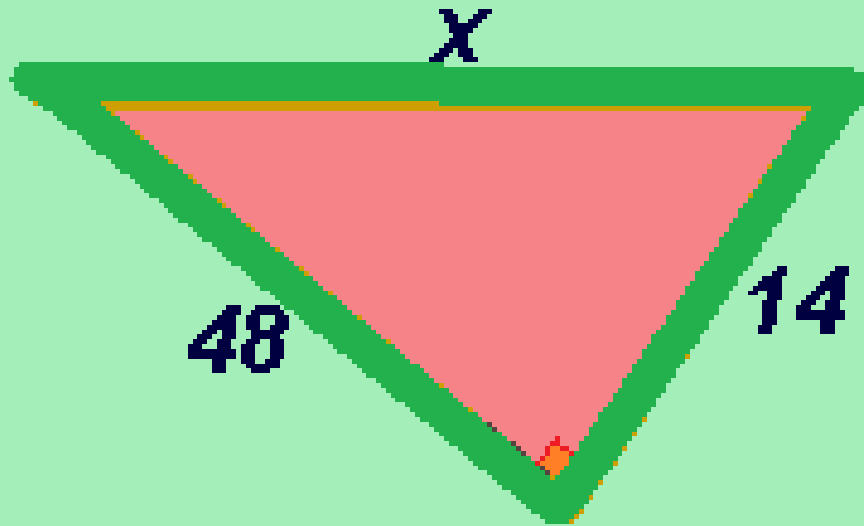
<http://sorinborodi.ro>



$$\begin{aligned}8^2 + 15^2 &= x^2 \\64 + 225 &= x^2 \\x^2 &= 64 + 225 \\x^2 &= 289 \\x &= \sqrt{289} \\x &= 17\end{aligned}$$

# Pythagorean theorem – examples

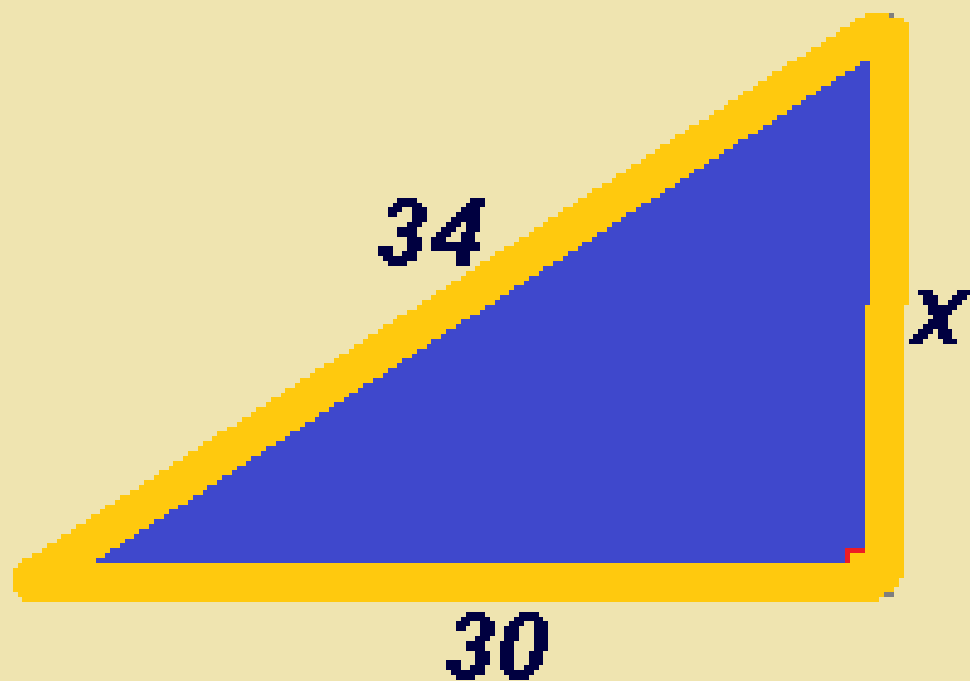
<http://sorinborodi.ro>



$$\begin{aligned}14^2 + 48^2 &= x^2 \\196 + 2304 &= x^2 \\x^2 &= 196 + 2304 \\x^2 &= 2500 \\x &= \sqrt{2500} \\x &= 50\end{aligned}$$

# Pythagorean theorem – examples

<http://sorinborodi.ro>

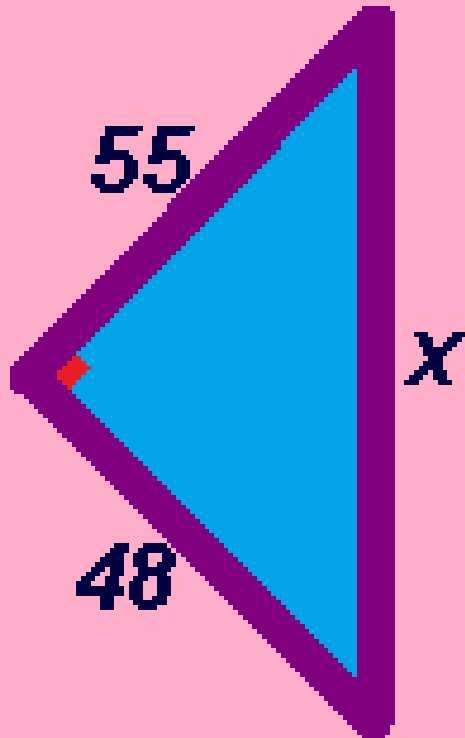


$$\begin{aligned}x^2 + 30^2 &= 34^2 \\x^2 + 900 &= 1156 \\x^2 &= 1156 - 900 \\x^2 &= 256 \\x &= \sqrt{256} \\x &= 16\end{aligned}$$



# Pythagorean theorem - examples

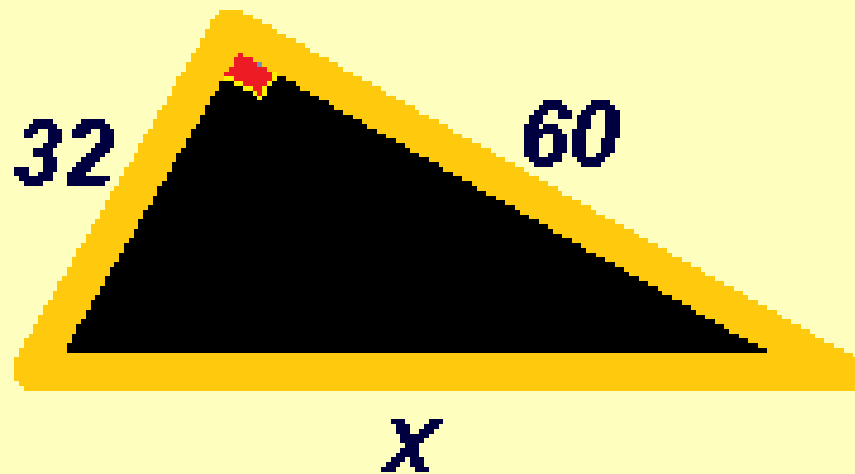
<http://sorinborodi.ro>



$$\begin{aligned}48^2 + 55^2 &= x^2 \\2304 + 3025 &= x^2 \\x^2 &= 2304 + 3025 \\x^2 &= 5329 \\x &= \sqrt{5329} \\x &= 73\end{aligned}$$

# Pythagorean theorem - examples

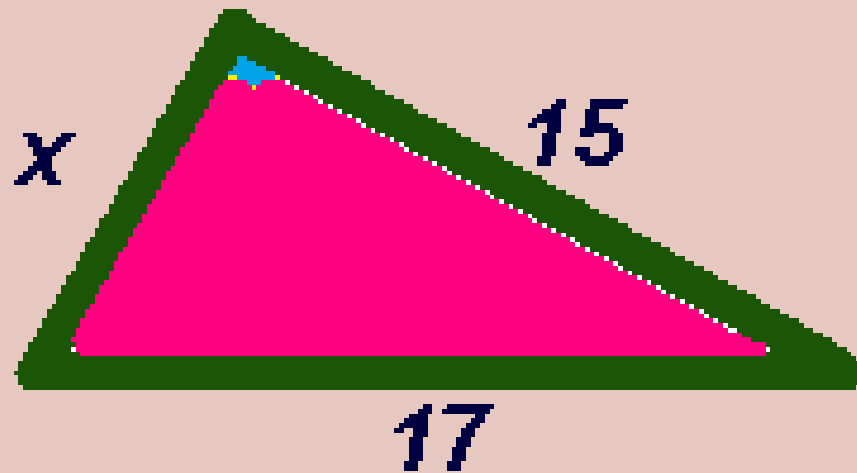
<http://sorinborodi.ro>



$$\begin{aligned}32^2 + 60^2 &= x^2 \\1024 + 3600 &= x^2 \\x^2 &= 1024 + 3600 \\x^2 &= 4624 \\x &= \sqrt{4624} \\x &= 68\end{aligned}$$

# Pythagorean theorem - examples

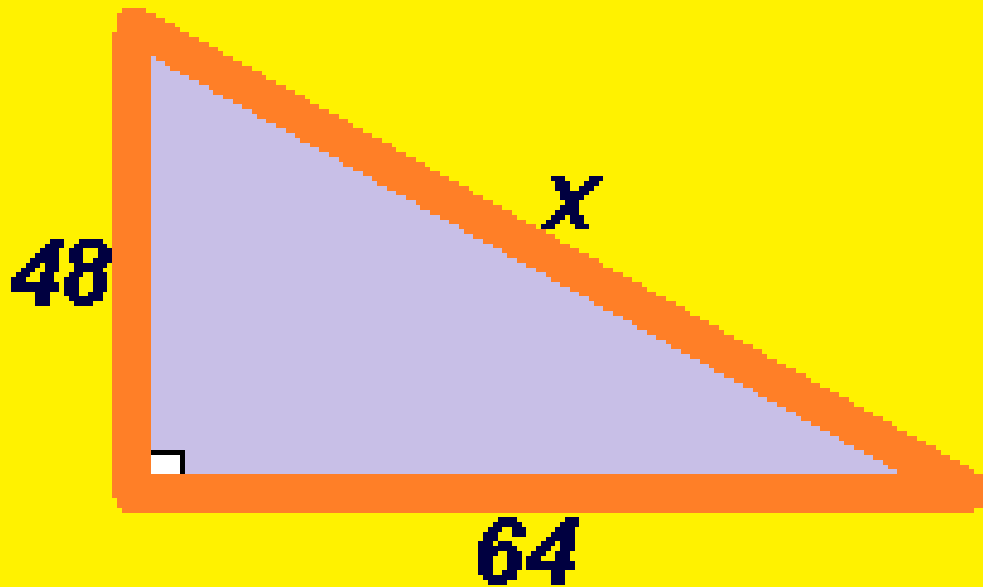
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 15^2 &= 17^2 \\x^2 + 225 &= 289 \\x^2 &= 289 - 225 \\x^2 &= 64 \\x &= \sqrt{64} \\x &= 8\end{aligned}$$

# Pythagorean theorem - examples

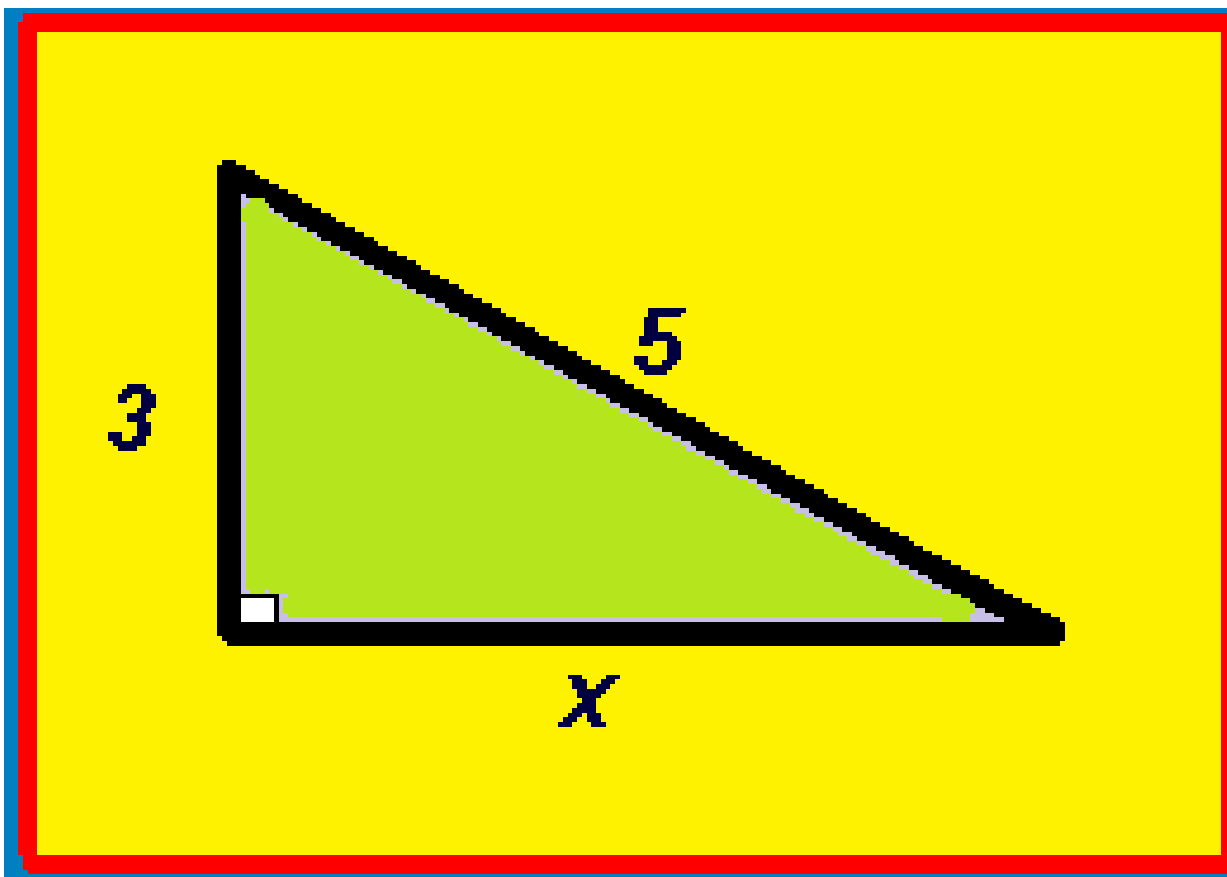
<http://sorinborodi.ro>



$$\begin{aligned}48^2 + 64^2 &= x^2 \\2304 + 4096 &= x^2 \\x^2 &= 2304 + 4096 \\x^2 &= 6400 \\x &= \sqrt{6400} \\x &= 80\end{aligned}$$

# Pythagorean theorem – examples

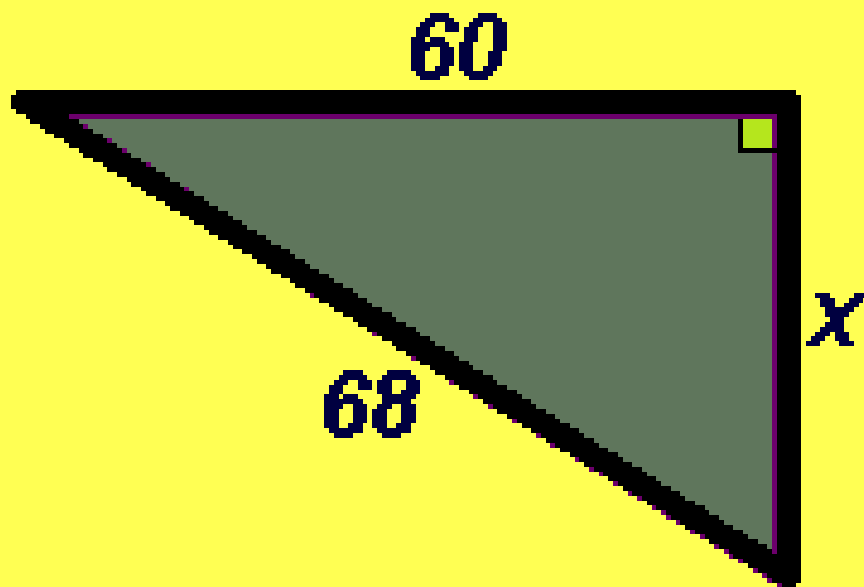
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 3^2 &= 5^2 \\x^2 + 9 &= 25 \\x^2 &= 25 - 9 \\x^2 &= 16 \\x &= \sqrt{16} \\x &= 4\end{aligned}$$

# Pythagorean theorem – examples

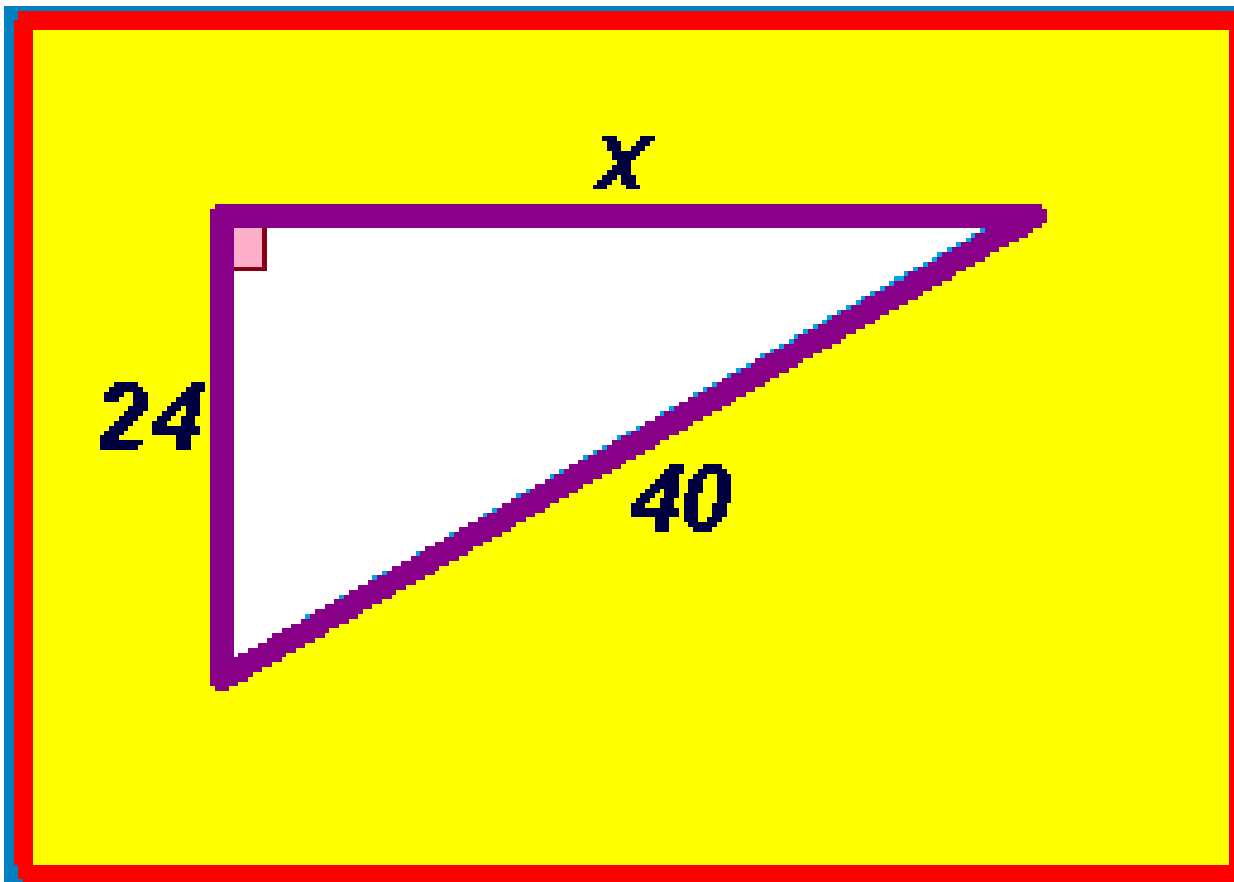
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 60^2 &= 68^2 \\x^2 + 3600 &= 4624 \\x^2 &= 4624 - 3600 \\x^2 &= 1024 \\x &= \sqrt{1024} \\x &= 32\end{aligned}$$

# Pythagorean theorem – examples

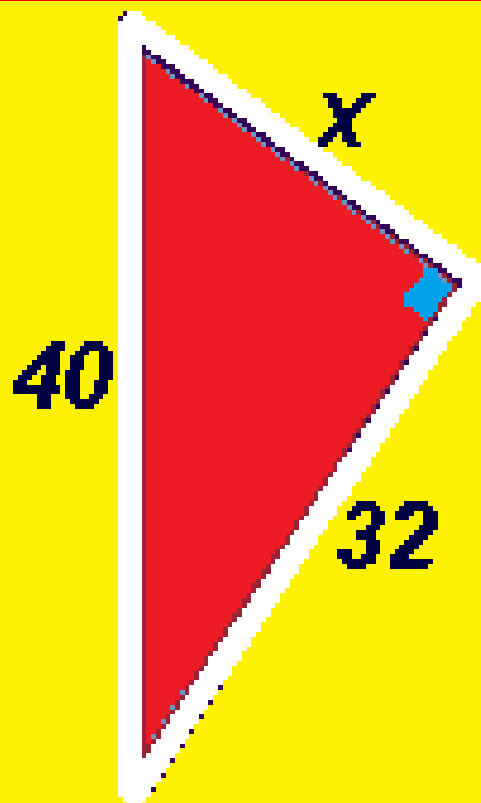
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 24^2 &= 40^2 \\x^2 + 576 &= 1600 \\x^2 &= 1600 - 576 \\x^2 &= 1024 \\x &= \sqrt{1024} \\x &= 32\end{aligned}$$

# Pythagorean theorem – examples

<http://sorinborodi.ro>

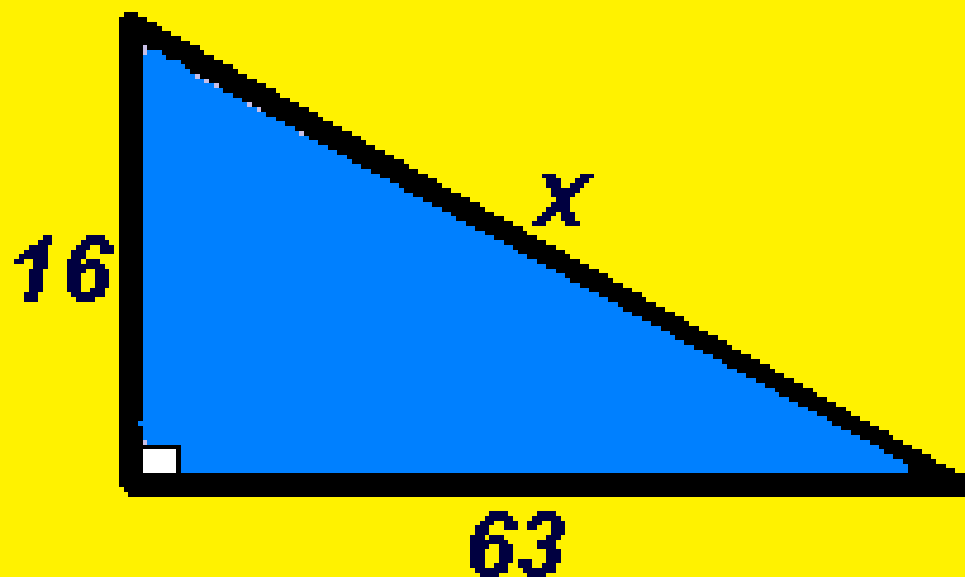


$$\begin{aligned}x^2 + 32^2 &= 40^2 \\x^2 + 1024 &= 1600 \\x^2 &= 1600 - 1024 \\x^2 &= 576 \\x &= \sqrt{576} \\x &= 24\end{aligned}$$



# Pythagorean theorem - examples

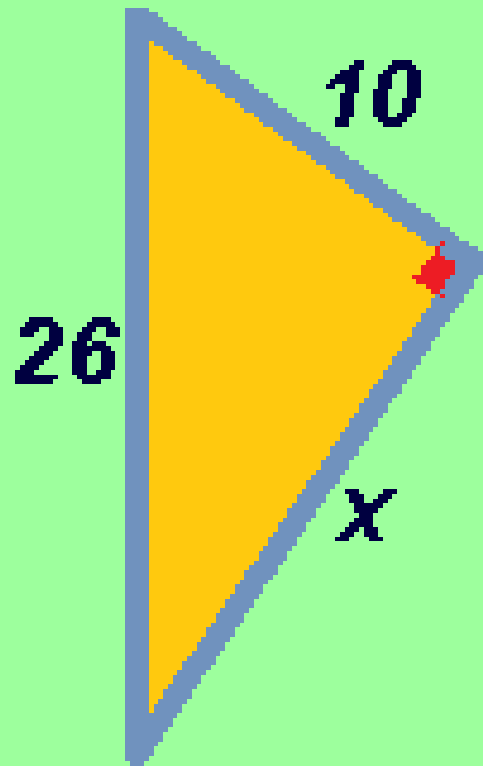
<http://sorinborodi.ro>



$$\begin{aligned}16^2 + 63^2 &= x^2 \\256 + 3969 &= x^2 \\x^2 &= 256 + 3969 \\x^2 &= 4225 \\x &= \sqrt{4225} \\x &= 65\end{aligned}$$

# Pythagorean theorem – examples

<http://sorinborodi.ro>



$$x^2 + 10^2 = 26^2$$

$$x^2 + 100 = 676$$

$$x^2 = 676 - 100$$

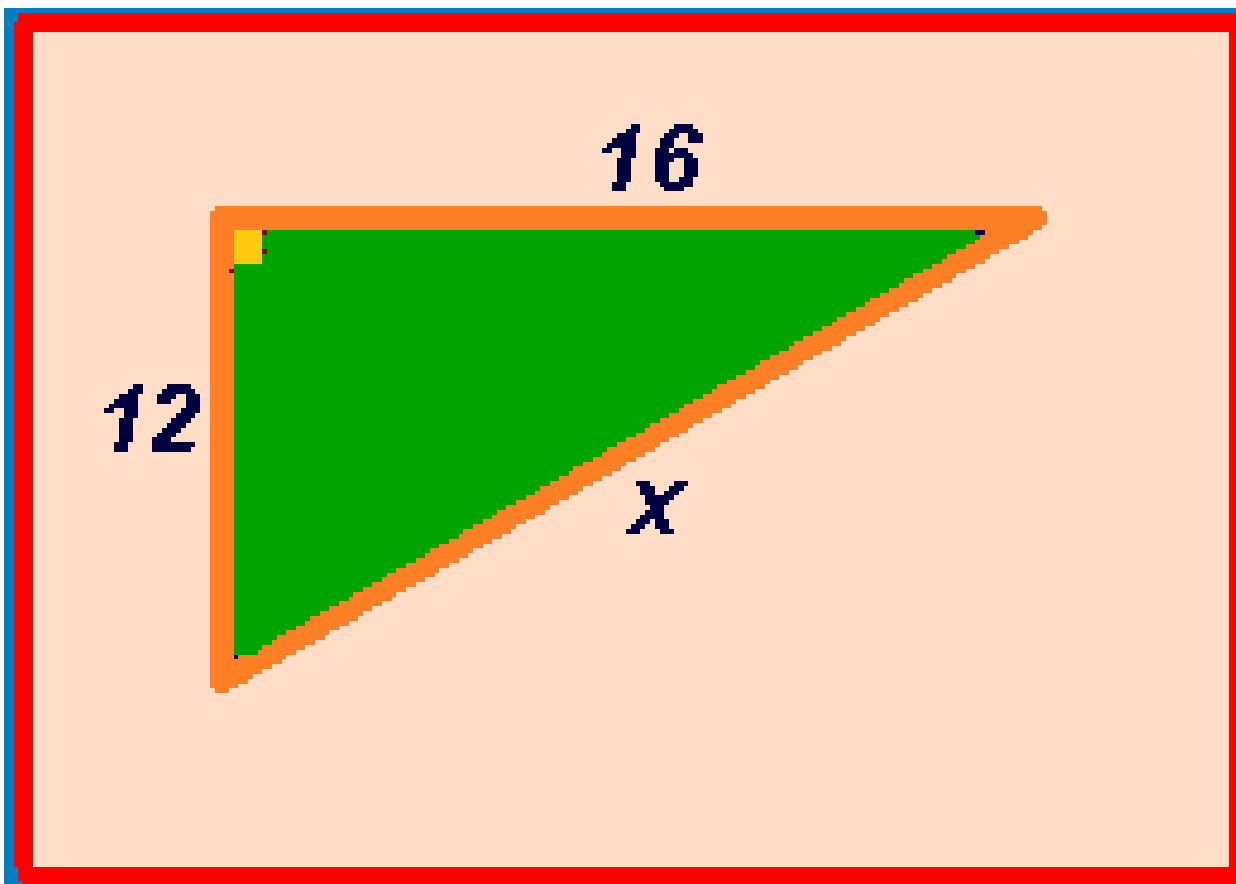
$$x^2 = 576$$

$$x = \sqrt{576}$$

$$x = 24$$

# Pythagorean theorem - examples

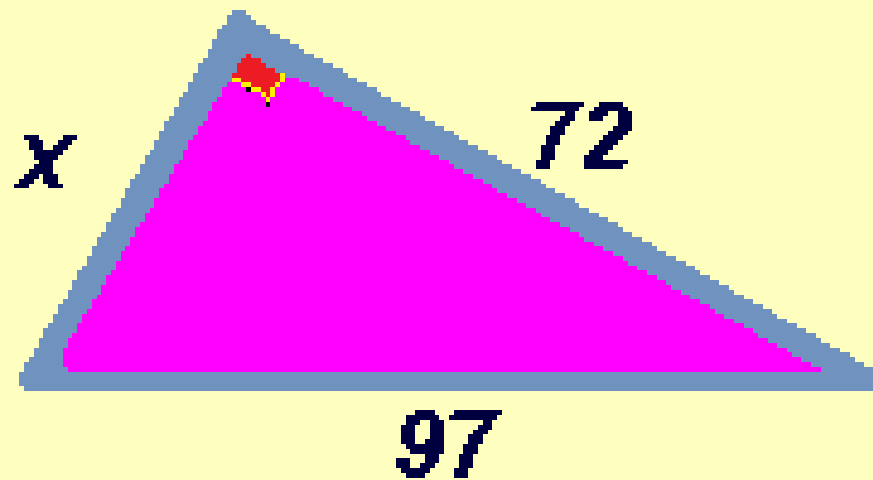
<http://sorinborodi.ro>



$$\begin{aligned}12^2 + 16^2 &= x^2 \\144 + 256 &= x^2 \\x^2 &= 144 + 256 \\x^2 &= 400 \\x &= \sqrt{400} \\x &= 20\end{aligned}$$

# Pythagorean theorem – examples

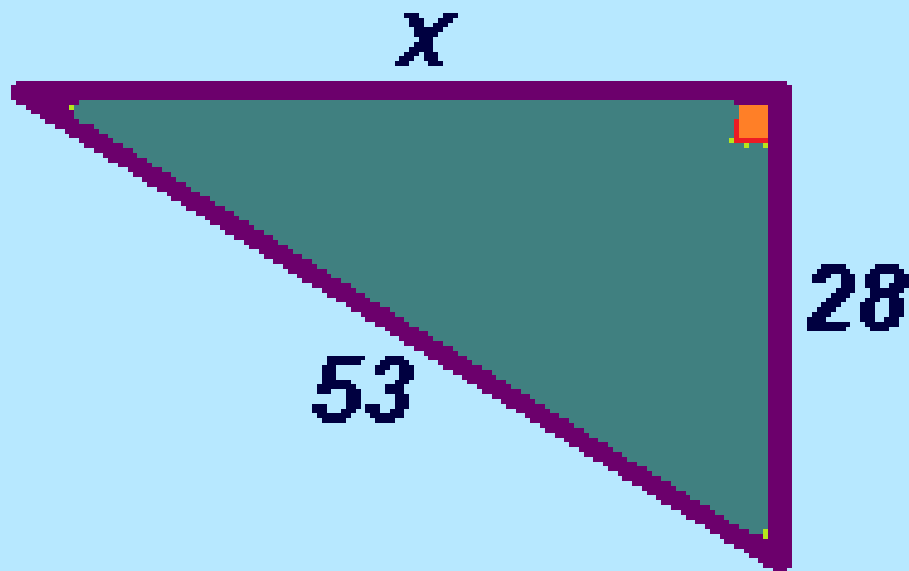
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 72^2 &= 97^2 \\x^2 + 5184 &= 9409 \\x^2 &= 9409 - 5184 \\x^2 &= 4225 \\x &= \sqrt{4225} \\x &= 65\end{aligned}$$

# Pythagorean theorem – examples

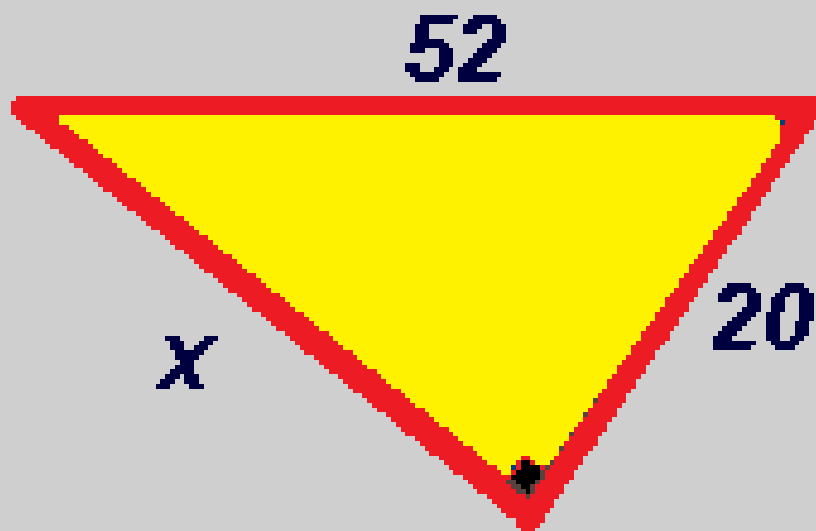
<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 28^2 &= 53^2 \\x^2 + 784 &= 2809 \\x^2 &= 2809 - 784 \\x^2 &= 2025 \\x &= \sqrt{2025} \\x &= 45\end{aligned}$$

# Pythagorean theorem – examples

<http://sorinborodi.ro>



$$\begin{aligned}x^2 + 20^2 &= 52^2 \\x^2 + 400 &= 2704 \\x^2 &= 2704 - 400 \\x^2 &= 2304 \\x &= \sqrt{2304} \\x &= 48\end{aligned}$$