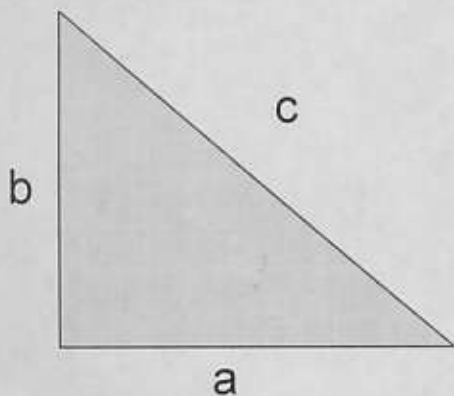


Math 092
Quiz 7
7.7 Geometric Applications

1) In a right triangle find the length of the side not given:



$$\begin{aligned} a &= 4 \\ b &= 4\sqrt{15} \\ c &= 16 \end{aligned}$$

$$\begin{aligned} a^2 + b^2 &= c^2 \\ 4^2 + b^2 &= 16^2 \\ b^2 &= 16^2 - 4^2 \\ b^2 &= 256 - 16 \\ b^2 &= 240 \\ b &= \pm\sqrt{240} \\ b &= \sqrt{15} \cdot \sqrt{16} \\ b &= 4\sqrt{15} \end{aligned}$$

For the given triangle find the missing lengths.

2)

$$\begin{aligned} a &= 14 \\ b &= 14 \quad \text{] because isosceles} \\ c &= 14\sqrt{2} \end{aligned}$$

$$14^2 + 14^2 = c^2$$

$$2(14^2) = c^2$$

$$\pm\sqrt{2} \cdot \sqrt{14^2} = c$$

$$14\sqrt{2} = c$$

