Foundations of Math 9

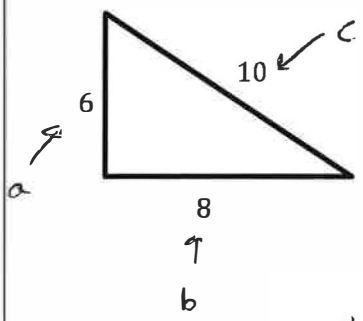
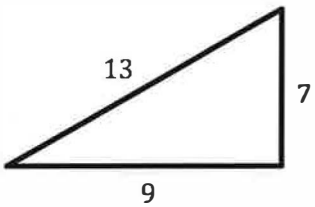
Name: KEY

Section R.1 – Proficiency Check – Pythagorean Theorem and Squares – Part 2

Show using Factors that the following numbers are perfect squares Looking for 2 Identical Factors.

Emerging	Proficient	Extending
144 2 72 8 9 2 4 3 3 2 2 2·2·3 ·2·2·3 12·12 $\boxed{12}$	441 3 147 3 49 7 7 3·7·3·7 21·21 $\boxed{21}$	1296 2 648 2 324 2 162 2 81 9 9 2·2·9·2·2·9 36 36 $\boxed{36}$

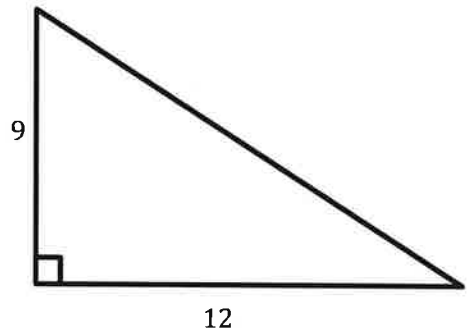
Prove whether or not the triangles are Right Angle Triangles using Pythagorean Theorem: $a^2 + b^2 = c^2$

Proficient	Proficient
 this has to be true $6^2+8^2=10^2$ 36+64=100 100=100 ✓ YES IT IS!	 $7^2+9^2=13^2$ 49+81=169 130=169 NOPE NOT A RIGHT ANGLE

Solve the Right-Angle Triangles for the missing Information

Use $a^2+b^2=c^2$ c is the hypotenuse

Proficient



$9^2+12^2=c^2$

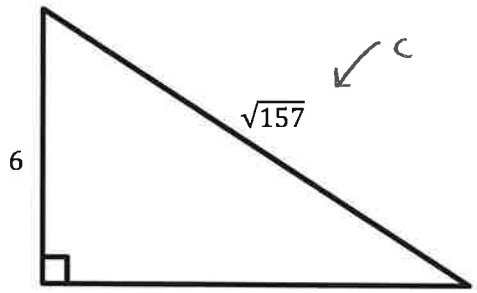
$81+144=c^2$

$225=c^2$

$\sqrt{225}=c$

$\boxed{15=c}$

Extending



so we need to subtract

$\sqrt{157}^2-6^2=b^2$

$157-36=b^2$

$121=b^2$

$\sqrt{121}=b$

$\boxed{b=11}$