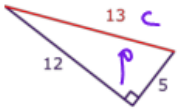
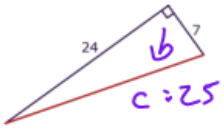
Pythagorean Theorem (3-8)

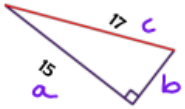
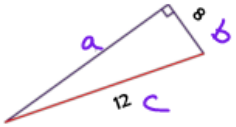
pythagorean theorem	Decode
Definition $a^2+b^2=c^2$	Example

Example 1: Solving for the Hypotenuse

Find the unknown side length.

I Do	We Do
 $a^2+b^2=c^2$ $5^2+12^2=13^2$ $25+144=169$ $169=169$✓ yes	 $c=25$ $a^2+b^2=c^2$ $7^2+24^2=c^2$ $49+576=c^2$ $\sqrt{625}=\sqrt{c^2}$ $25=c$

Example 2: Solving for a Leg

I Do	We Do
 $a^2+b^2=c^2$ $15^2+b^2=17^2$ $225+b^2=289$ $-225 \quad -225$ $\sqrt{b^2}=\sqrt{64}$ $b=8$	 $a^2+b^2=c^2$ $a^2+8^2=12^2$ $a^2+64=144$ -64 $\sqrt{a^2}=\sqrt{80}$ $a=8.9$

IXL Lessons: 8th Grade → R.1, R.2, R.4, R.5