

Summer Geometry Semester 1 Unit 3 Part 2 Special Right Triangles

Lesson 029 | Geometry | Right and special right triangles

<https://www.youtube.com/watch?v=hJ-GrjgDcSE>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

A 30° - 60° - 90° triangle has shorter leg 36. Find the longer leg and hypotenuse.

02

A 45° - 45° - 90° triangle has hypotenuse $26\sqrt{2}$. Find both legs and area.

03

A 45° - 45° - 90° triangle has hypotenuse $18\sqrt{2}$. Find both legs and area.

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04

A 30° - 60° - 90° triangle has shorter leg 30. Find the longer leg and hypotenuse.

05

A 45° - 45° - 90° triangle has hypotenuse $6\sqrt{2}$. Find both legs and area.

06

A 45° - 45° - 90° triangle has hypotenuse $20\sqrt{2}$. Find both legs and area.

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01

A 30° - 60° - 90° triangle has shorter leg 36. Find the longer leg and hypotenuse.

The side ratio is $1:\sqrt{3}:2$. Longer leg $36\sqrt{3}$; hypotenuse 72.

02

A 45° - 45° - 90° triangle has hypotenuse $26\sqrt{2}$. Find both legs and area.

Each leg is $\text{hypotenuse}/\sqrt{2}=26$. $\text{Area}=(1/2)(26)^2=338$.

03

A 45° - 45° - 90° triangle has hypotenuse $18\sqrt{2}$. Find both legs and area.

Each leg is $\text{hypotenuse}/\sqrt{2}=18$. $\text{Area}=(1/2)(18)^2=162$.

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04

A 30° - 60° - 90° triangle has shorter leg 30. Find the longer leg and hypotenuse.

The side ratio is $1:\sqrt{3}:2$. Longer leg $30\sqrt{3}$; hypotenuse 60.

05

A 45° - 45° - 90° triangle has hypotenuse $6\sqrt{2}$. Find both legs and area.

Each leg is $\text{hypotenuse}/\sqrt{2}=6$. $\text{Area}=(1/2)(6)^2=18$.

06

A 45° - 45° - 90° triangle has hypotenuse $20\sqrt{2}$. Find both legs and area.

Each leg is $\text{hypotenuse}/\sqrt{2}=20$. $\text{Area}=(1/2)(20)^2=200$.