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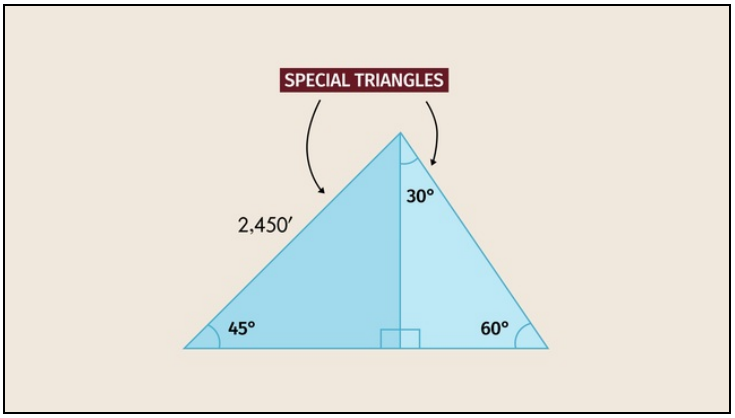
Special Triangles



1 **State what a triangle with two 45° angles is called and what is special about it.**

2 Solve for the height and distance travelled on land of the plane.

3 Calculate the distance Grandpa Lindbergh's plane will fall.

4 Determine the length of the missing side.

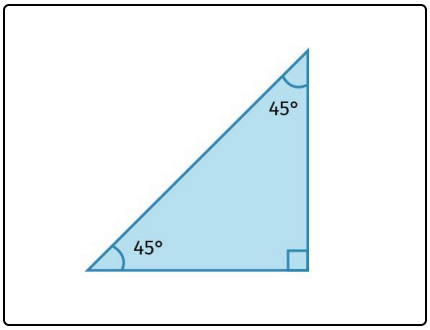
5 Find the distance Grandpa Lindbergh has to fly to get to a height of 1500 feet.

6 Calculate the length of the wooden slats needed to build the kite.

\+ with lots of tips, answer keys, and detailed answer explanations for all of the problems.

State what a triangle with two 45° angles is called and what is special about it.

Choose the correct statements.



- [ ] **A** equilateral right triangle
- [ ] **B** equilateral triangle
- [ ] **C** three sides of equal length
- [ ] **D** iscoceles right triangle
- [ ] **E** two sides of equal length

Hints for solving these problems

1 of 6

State what a triangle with two 45° angles is called and what is special about it.

Hint #1

All angles of an equilateral triangle are equal.

Hint #2

The sum of all the angles of any triangle is always 180°.

Hint #3

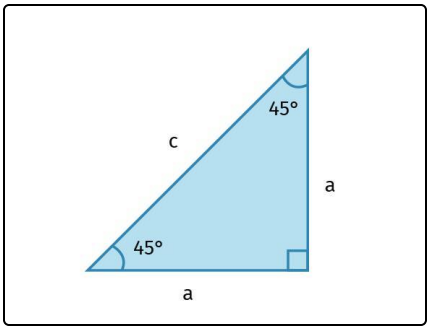
The opposite legs of equal angles have equal lengths.

Answers and detailed answer explanations for these problems

1 of 6

State what a triangle with two 45° angles is called and what is special about it.

Answer key: D, E



Any triangle with two 45° angles is an iscoceles right triangle.

We can see this in the following way:

- The sum of the three angles of any triangle is always 180°.
- Thus, if two angles are 45°, the last angle must be $180^\circ - (45^\circ + 45^\circ) = 90^\circ$
- Also, the triangle legs opposite to the 45° angles have equal lengths.