

Geometry

Write *yes* or *no*. If the answer is *yes*, sketch a possible triangle in the space.

1 Can a triangle be both right and isosceles?

2 Can a triangle be both right and obtuse?

3 Can a triangle be both right and equilateral?

4 Can a triangle be both scalene and obtuse?

Reasoning and Proof

Solve each puzzle to find the mystery number.

5 Multiple of 6 less than 48.
Tens digit is twice ones digit.

6 Multiple of 9 greater than 18 but less than 81.
Tens digit is one greater than the ones digit.

7 Square number greater than 5×5 but less than 10×10 .
One digit is 2 greater than the other.
Sum of the digits is 10.

8 Multiple of 6 greater than 6×2 but less than 6×10 .
One of the digits is a prime number.
Factors of the other digit are 1, 2, 3, and 6.

9 Factor of 96.
Sum of the digits is 12.
