6.

If △HJK is equilateral, what are the values of x and y?

```
        H
       /\
      /  \
  15 /    \ x+8
    /      \
   /        \
  J----------K
      1
      ─y - 6
      3
```
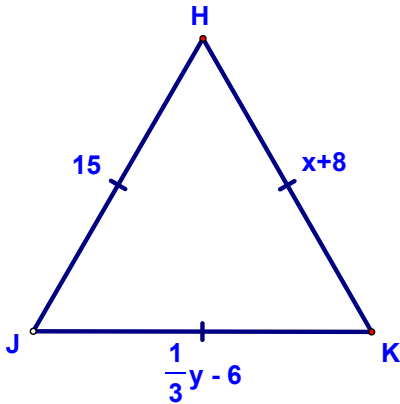
8.

Given: $\overline{BI} \cong \overline{RD}$
$\overline{RI} \cong \overline{BD}$
∠3 is comp. to ∠2

Prove: △RIB is a right △

```
R              D
 \    3
  \  /\
   \/  \
   /\  /
  2  \/
  1  /\
 I--------B
```
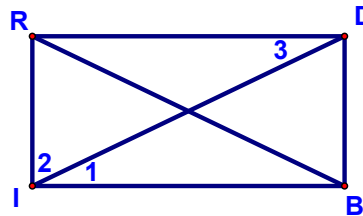
Statements	Reasons

10.

If △RST is isosceles, is it also equilateral?

R

$x + 7$ $3x + 5$

S $9 - x$ T

11.
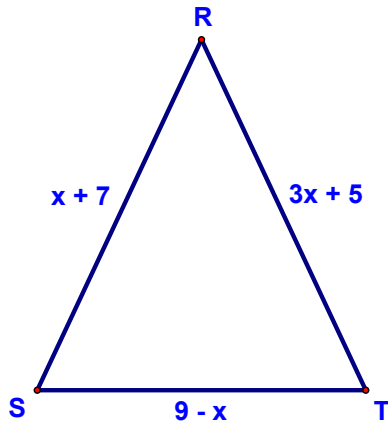
If △VSY is isoceles and its perimeter is less than 45, which side of △VSY is the base?

V

10 $x + 7$

S $2x - 8$ Y
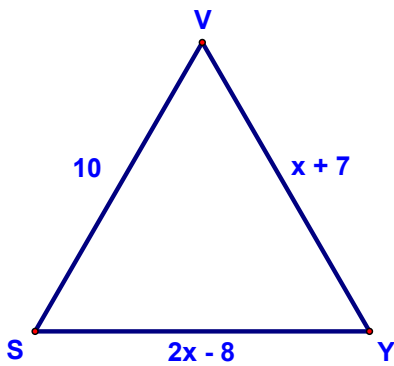
12.

Perimeter of △ABC = 20. Show that △ABC is scalene

A

x + 3   3x + 2

B   2x + 3   C
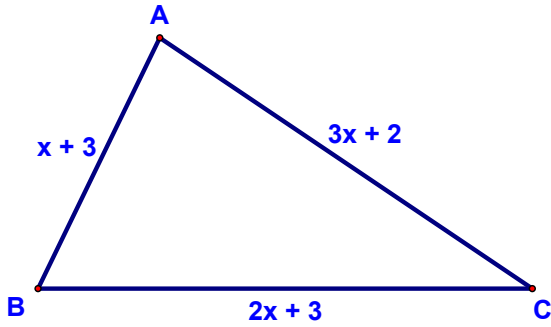
13.

The average length of the sides of △ABC is 14. How much longer than the average is the longest side?

A

x + 5

4x - 6

B

2x + 1

C
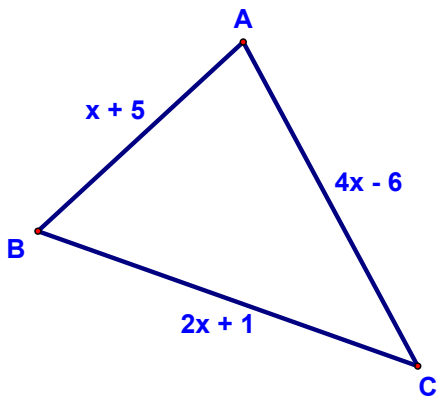
16.

How many different isosceles triangles can you find that have sides that are whole-number lengths and that have a perimeter of 18?