

Question #21623

Janice has 5 sticks of lengths 2,4,6,8, and 10 inches. using three sticks at a time as the sides of triangles, how many triangles can she make? Explain?

Solution

We can build triangle only when each side is smaller than the sum of two other/

So,

- 1) triangle with the sides: 4, 6, 8 inches, because $4 < 6+8$; $6 < 4+8$; $8 < 4+6$;
- 2) triangle with the sides: 4, 8, 10 inches, because $4 < 10+8$; $10 < 4+8$; $8 < 4+10$;
- 3) triangle with the sides: 10, 6, 8 inches, because $8 < 6+10$; $6 < 10+8$; $10 < 8+6$;

Answer: She can make three triangles.