

## Special Triangle

Input: •  $n$  is the no of lines.

•  $x_1, y_1$  &  $x_2, y_2$  are two arbitrary coordinate of the straight line  $xy$ .

• There ~~the~~ are  $n$  no of such co-ordinates

## Algorithm

for  $n \geq 4$   
1. Calculate slope for individual straight line.

Ex:  $s_1, s_2, s_3, \dots, s_n$

2. if  $s_1 \neq s_2 \neq s_3 \neq \dots \neq s_n$ .

then no of special triangle:  $n$

3. if  $s_1 = s_2$  &  $s_2 \neq s_3 \neq s_4 \dots \neq s_n$

then no of special triangle:  $(n-1)$

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4. if  $s_1 = s_2 = s_3$  &  $s_3 \neq s_4 \neq \dots \neq s_n$

then no of special triangle:  $(n-2)$



5. ~~\*~~ if <sup>minimum</sup> ~~maximum~~ 3 slopes are not equal to each other then no of special triangle : 0

for  $n=3$

if  $s_1 \neq s_2 \neq s_3$  no of special triangle : 1

else no of special triangle : 0

for  $n=4$

if  $s_1 \neq s_2 \neq s_3 \neq s_4$

no of triangle : 2

else if  $s_1 \neq s_2 \neq s_3 = s_4$

no of triangle : 1

else no of triangle : 0