

## Quiz 1

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Let  $A = (2, 3)$  and  $B = (-3, 6)$ .

1. Find the distance between  $A$  and  $B$ .
2. Find an equation for the line that passes through  $A$  and  $B$ .

**Solution:** The distance is given by the distance formula  $D = \sqrt{(2 - (-3))^2 + (3 - 6)^2} = \sqrt{25 + 9} = \sqrt{34}$ . To find the line through  $A$  and  $B$ , first find the slope,  $m = \frac{6-3}{-3-2} = \frac{3}{-5}$ . Then use the point slope form to get  $y - 3 = (-3/5)(x - 2)$  which is equivalent to  $y = -0.6x + 4.2$ .