

Find an equation

line $\frac{y-1}{x-2} = \frac{y_1-1}{x_1-2}$

1. Find the equation of the line passing through the points

$(1, 2)$ and $(3, 4)$

$\frac{y-2}{x-1} = \frac{4-2}{3-1} = \frac{2}{2} = 1$
 $y-2 = x-1$
 $y = x+1$

2. Find the equation of the line passing through the points

$(2, 3)$ and $(4, 5)$

$\frac{y-3}{x-2} = \frac{5-3}{4-2} = \frac{2}{2} = 1$

$(3, 4)$ and $(5, 6)$

$\frac{y-4}{x-3} = \frac{6-4}{5-3} = \frac{2}{2} = 1$

$(4, 5)$ and $(6, 7)$

$\frac{y-5}{x-4} = \frac{7-5}{6-4} = \frac{2}{2} = 1$

3. Find the equation of the line passing through the points $(1, 2)$ and $(3, 4)$

$\frac{y-2}{x-1} = \frac{4-2}{3-1} = 1$
 $y-2 = x-1$
 $y = x+1$

4. Find the equation of the line passing through the points

$(2, 3)$ and $(4, 5)$

$(3, 4)$ and $(5, 6)$

$(4, 5)$ and $(6, 7)$

$(5, 6)$ and $(7, 8)$

$(6, 7)$ and $(8, 9)$

$(7, 8)$ and $(9, 10)$

5. Find the equation of the line passing through the points

$(1, 2)$ and $(3, 4)$

$\frac{y-2}{x-1} = \frac{4-2}{3-1} = 1$
 $y-2 = x-1$
 $y = x+1$

$(2, 3)$ and $(4, 5)$

$\frac{y-3}{x-2} = \frac{5-3}{4-2} = 1$
 $y-3 = x-2$
 $y = x+1$

$(3, 4)$ and $(5, 6)$

$\frac{y-4}{x-3} = \frac{6-4}{5-3} = 1$
 $y-4 = x-3$
 $y = x+1$

$(4, 5)$ and $(6, 7)$

$\frac{y-5}{x-4} = \frac{7-5}{6-4} = 1$
 $y-5 = x-4$
 $y = x+1$

$(5, 6)$ and $(7, 8)$

$\frac{y-6}{x-5} = \frac{8-6}{7-5} = 1$
 $y-6 = x-5$
 $y = x+1$

$(6, 7)$ and $(8, 9)$

$\frac{y-7}{x-6} = \frac{9-7}{8-6} = 1$
 $y-7 = x-6$
 $y = x+1$

$(7, 8)$ and $(9, 10)$

$\frac{y-8}{x-7} = \frac{10-8}{9-7} = 1$
 $y-8 = x-7$
 $y = x+1$