# Transcomputation - Exercise 4 

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## Note

The gradient, $m$, from point $P_{1}=\left(x_{1}, y_{1}\right)$ to $P_{2}=\left(x_{2}, y_{2}\right)$ is given by:

$$
m=\frac{y_{2}-y_{1}}{x_{2}-x_{1}}
$$

## 1 Calculate the Gradient Between:

$1.1(2,4)$ and $(2,8)$.
$1.2(2,8)$ and $(2,4)$.
$1.3(2,4)$ and $(8,4)$.
$1.4(8,4)$ and $(2,4)$.
$1.5(2,4)$ and $(\infty, 4)$.
$1.6(2,4)$ and $(\infty, 8)$.
$1.7(2,4)$ and $(\infty, \infty)$.
$1.8(2,4)$ and $(2, \Phi)$.

## 2 Sketching Functions

2.1 Draw the 2D, Cartesian, $x$ - and $y$-axes.
2.2 Sketch all of the position vectors with a gradient of $-\infty$.
2.3 Sketch all of the position vectors with a gradient of $\infty$.
2.4 Sketch all of the position vectors with a gradient of $\Phi$.
2.5 Sketch all of the position vectors with a gradient of 0 .

