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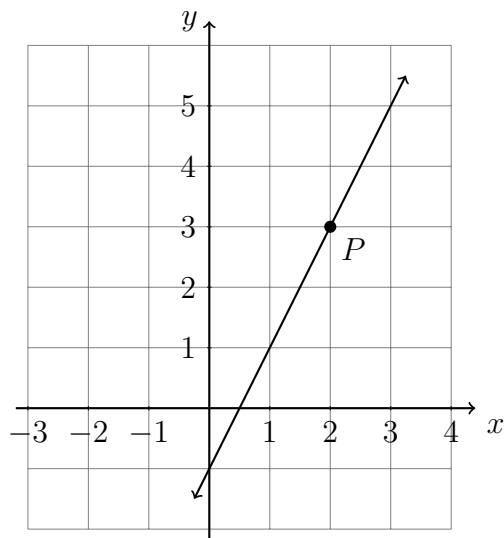
BECA / Dr. Huson / Geometry 04 Analytic Geometry

4.10 Linear equationsEquations of a straight line: $f(x) = mx + c$, $ax + by + d = 0$, $(y - y_1) = m(x - x_1)$ Gradient: $m = \frac{y_2 - y_1}{x_2 - x_1}$ 1. A linear equation f is graphed below.

(a) Write down it's slope.

 $m =$ (b) Write down it's y -intercept. $b =$

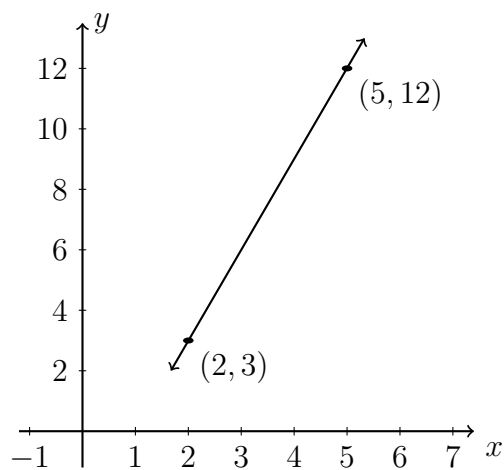
(c) Write down the equation of the line.

(d) State the coordinates of the point P .2. Write the linear equation $y - 2 = 3(x + 1)$ in the form $y = mx + c$.3. A line has a gradient (slope) of $-\frac{3}{2}$ and passes through the point $(4, 1)$. Find the equation of the line in the form $y = mx + b$.

4. A line goes through the points $(2, 3)$ and $(5, 12)$.

(a) Find the gradient of the line.

(b) Find the equation of the line in the form $y = mx + b$.



5. Find the equation of the line through the points $(4, 3)$ and $(-2, 18)$.