Use **Ax+By+C = 0**

1. Find the equation of a line which has x-int = 2 and y-int = 4.

2. Find the equation of the line parallel to 2x-3y+21=0 that passes through (4,5).

3. Find the equation of a line with a slope equal to -1/3 and passes through (3,-8).

4. Find the equation of a line that passes through (4, 12) and (3, 7).

Use Ax+By+C = 0 $y-y_1=m(x-x_1)$

1. Find the equation of a line which has x-int = 2 and y-int = 4.

$y=mx+b$

(2,0) (0,4)

$m=\frac{y_2-y_1}{x_2-x_1}=\frac{4-0}{0-2}=\frac{4}{-2}=-2$

$y-y_1=m(x-x_1)$
$y-0=-2(x-2)$
$y=-2x+4$
$2x+y-4=0$

$y=mx+b$
$y=-2x+4$
$2x+y-4=0$

2. Find the equation of the line parallel to 2x-3y+21=0 that passes through (4,5).

$2x-3y+21=0$
$\frac{-3y}{-3}=\frac{-2x}{-3}-\frac{21}{-3}$
$y=\frac{2}{3}x+7$
$m=\frac{2}{3}$

$y-y_1=m(x-x_1)$
$y-5=\frac{2}{3}(x-4)$
$3(y-5)=2(x-4)$
$3y-15=2x-8$
$-2x+3y-15+8=0$
$-2x+3y-7=0$
$2x-3y+7=0$

3. Find the equation of a line with a slope equal to -1/3 and passes through (3,-8).

$m = -\frac{1}{3}$ $(3, -8)$

$y - y_1 = m(x - x_1)$

$y + 8 = -\frac{1}{3}(x - 3)$

$3(y+8) = -1(x-3)$

$3y + 24 = -x + 3$

$3y + 24 + x - 3 = 0$

$x + 3y + 21 = 0$

4. Find the equation of a line that passes through (4, 12) and (3, 7).

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$= \frac{12-7}{4-3}$

$= 5$

$y - y_1 = m(x - x_1)$

$y - 7 = 5(x - 3)$

$y - 7 = 5x - 15$

$-5x + y - 7 + 15 = 0$

$-5x + y + 8 = 0$

$5x - y - 8 = 0$

Review Time...

1) Review - Coordinate Geometry.pdf

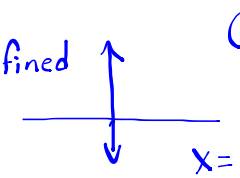
2) Text: Read Skills Summary p. 387

Practice Questions p. 388 - 390

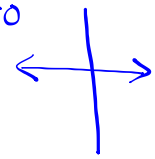
Practice Test p. 391

Ex 4.2

4. h) m undefined



m = zero



4. i) $(-6, 4)$ $m = -\frac{1}{2}$

$y - y_1 = m(x - x_1)$

$y - 4 = -\frac{1}{2}(x + 6)$

$2(y - 4) = 2\left(-\frac{1}{2}(x + 6)\right)$

$2y - 8 = -x - 6$

$x + 2y - 8 + 6 = 0$

$x + 2y - 2 = 0$

Attachments

Review - Coordinate Geometry.pdf