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

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

$y = mx+b$

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

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

(2,0) (0,4)

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

$y = mx+b$

$y = -2x+4$

$2x+y-4=0$

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

$2x-3y+21=0$

$\frac{-3y}{-3} = \frac{-2x}{-3} - \frac{21}{-3}$

$y = \frac{2}{3}x+7$

$m = \frac{2}{3}$

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

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

$3y-15 = 2x-8$

$2x-3y-8+15=0$

$2x-3y+7=0$

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

$y = mx + b$

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

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

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

$3y + 24 = -x + 3$

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

$\boxed{x + 3y + 21 = 0}$

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

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

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

$= 5$

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

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

$y - 7 = 5x - 15$

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

$\boxed{5x - y - 8 = 0}$

Review Time...

1) Review - Coordinate Geometry.pdf

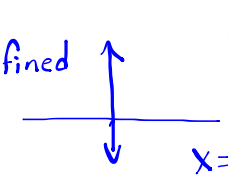
2) **Text: Read Skills Summary p. 387**

Practice Questions p. 388 - 390

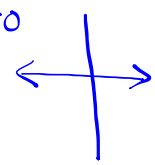
Practice Test p. 391

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