Straight Lines Homework

1) Draw axes on the squares in your book that run from -10 to +10 on both the x and y axes. Use tables of values to accurately plot the following 3 lines on the same diagram x -5 0 3 $y = 2\alpha + 3$ a) L, y -7 3 9 y = -x+6 2-406 b) Lr 5 10 6 0 $y = \pm x - 6$ 26 c) L3 -4 0 0 y -8 -6 Write down the coordinates of the points of intersection of (1,5) d) Li and Lz (-6,-9) e) Li and Lz (8, -2)f) Lz and Lz



2) Find the equation of a line parallel to y=3x-5 which passes through (4,7) $m_1 = 3 \implies m_2 = 3 \text{ since parallel}$ Line of form y = 3x + c $5ub (4,7) \qquad 7 = 3(4) + c$ 7 = 12 + c7 - 12 = c-5 = cy = 3x - 5

3) Find the equation of a line perpendicular to y = ±x+4 which passes through (2, -3) m, = さ => m2 = - ~ = -2 Since perpendicular Line of form y = -2x+c Sub (2,-3) -3 = -2(2) + (2)-3 = -4 + c-3+4 = C +1 = C $\mathcal{Y} = -2\mathcal{X} + 1$

4) Find the equation of a line
which passes through
$$(2,-3)$$
 and $(5,9)$
gradient $m = \frac{52-91}{82-81}$
 $m = \frac{9--3}{5-2} = \frac{9+3}{3} = \frac{12}{3} = 4$
Line of form $y = 4x + c$
Sub $(5,9)$ $q = 4(5) + c$
 $q = 20 + c$
 $-11 = c$
 $y = 4x - 11$

H