## PARALLEL AND PERPENDICULAR LINES

|                          | Two points that $l_1$ passes through. |                  | Equation of a line perpendicular to $l_1$ , through |
|--------------------------|---------------------------------------|------------------|---|
| Equation of line $l_{1}$ | Point A                               | Point B          | point A, in the form $ax + by + c = 0$              |
|                          |                                       |                  |   |
|                          | (-5,a)                                | ( <i>b</i> , –5) |   |
| 2x + 3y - 5 = 0          |                                       |                  |   |
|                          | <i>a</i> =                            | b =              |   |
|                          |                                       |                  |   |
|                          |                                       |                  |   |
|                          | (-4,1)                                | (-3, -2)         |   |
|                          |                                       |                  |   |
|                          |                                       |                  |   |
|                          | (a, 1)                                | (b, 3)           |   |
|                          |                                       |                  | x + 3y - 3 = 0                                      |
|                          | a =                                   | b =              |   |
|                          |                                       |                  |   |
|                          |                                       | ( <i>b</i> , –2) |   |
| -x + 6y + 17 = 0         |                                       |                  | 6x + y - 65 = 0                                     |
|                          |                                       | b =              |   |
|                          |                                       | ~                |   |