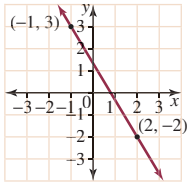
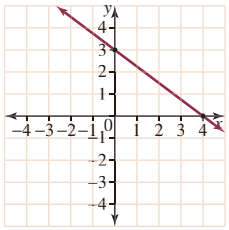
EXERCISE 3F

1 The difference between plotting a graph and sketching a graph is that a sketch is not necessarily drawn to scale and the axes scale is not shown.

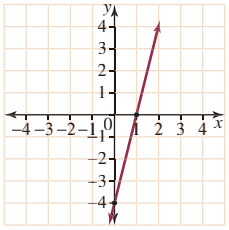
2 a



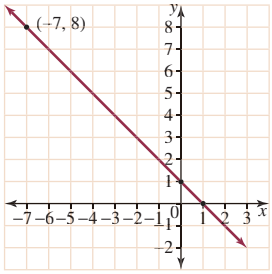
b



c



d



3

Step 1 Determine which two points to use.

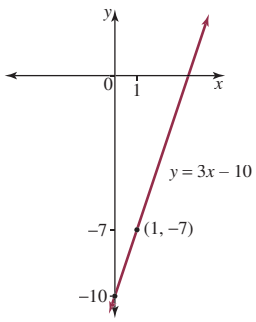
→ **Step 2** Draw and label the Cartesian plane.

→ **Step 3** Make the position of the first point.

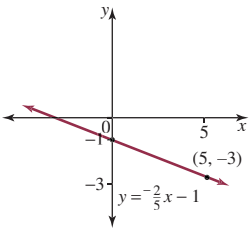
↓ **Step 4** Mark the position of the second point.

← **Step 5** Draw and label the line.

4 a

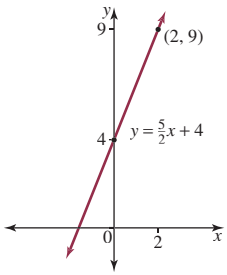


b

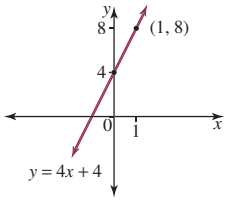


5 C

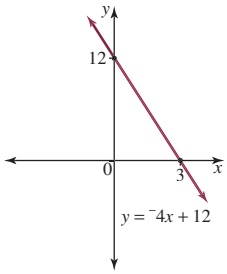
6



7



8 a



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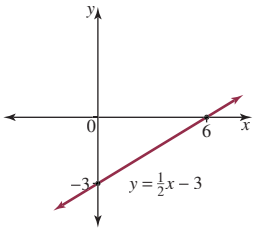
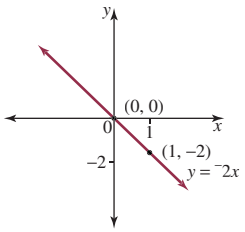
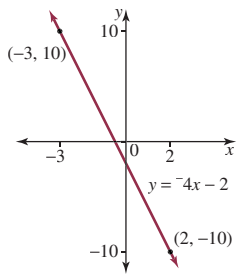


9

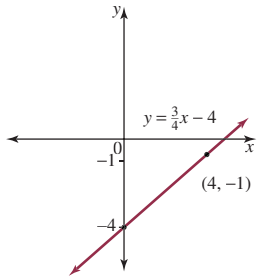


10 a $y = 10$ **b** $y = -10$

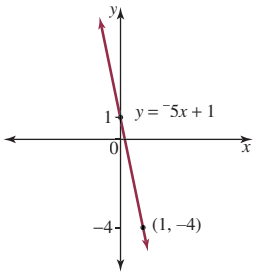
c



11 a



b



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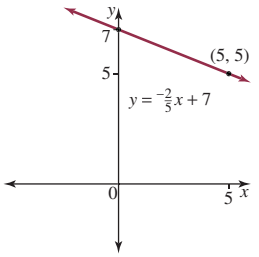
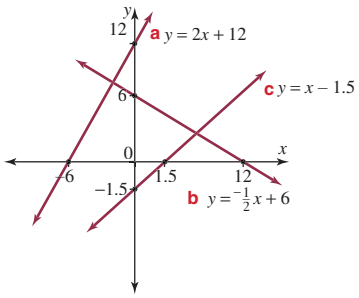
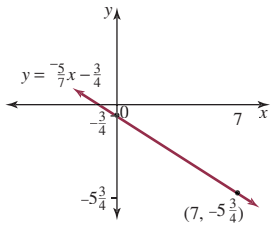


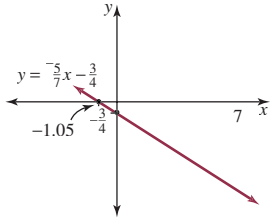
12



13 a i



ii



iii Answers will vary.

b Answers will vary.

Going further

C

Extension

1 $y = 6x + 12$

2 $y = 6x - 1$

3 $y = 20x - 65$

EXERCISE 3G

1 A CAS calculator can trace points on a line and find the x- and y-intercepts.

2 **a** **i** $^-15$ **ii** $^-5$ **b** **i** 6 **ii** 2 **c** **i** 6 **ii** 7

d **i** $^-64$ **ii** $\frac{7}{2}$ **e** **i** 1.1 **ii** 1 **f** **i** $^-4$ **ii** 5.5

g **i** 3.5 **ii** 2 **h** **i** 12.5 **ii** 5 **i** **i** $^-337.5$ **ii** $^-12$

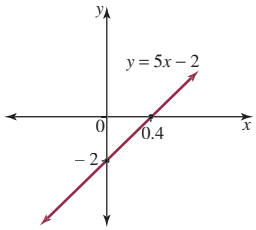
3 **a** $y = \frac{-4}{5}x + 4$ **b** $y = 3x - 6$ **c** $y = 4x + 12$

d $y = \frac{15}{4}x - 12$ **e** $y = \frac{-4}{15}x - 3.2$ **f** $y = ^-x + 6$

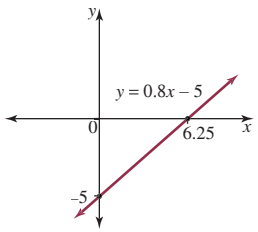
g $y = 2.\dot{2}x + 0.\dot{5}$ **h** $y = ^-2.5x + 95$

i $y = 1.79x + 1.79$

4 a

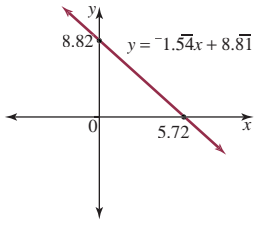


b



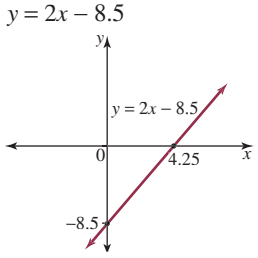
5 a $y = ^-1.\overline{54}x + 8.\overline{81}$

b



6 a $y = 2x - 8.5$

b



c $y = 7.5$ **d** $x = 10.25$