Examples: Find the equation of a line that…

a)   ***b)***

MPM 1D – Finding a line given conditions
Find the equation of a line in the form y = mx + b that
meets the following conditions. Answers on the right.

c) has a slope of $\dfrac{2}{3}$ and passes through the point (9, -2)

d) has a slope of $-\dfrac{1}{5}$ and passes through the point (5, 4)

e) has a slope of 3 and passes through the point (–4, –5)
f) passes through the point (-2, 4) and (2, 12)
g) passes through the point (4, 5) and (2, 6)
h) passes through the point (2, 6) and (–8, 1)
i) passes through the point (–3, –3) and (3, –5)
j) is a vertical line and passes through the point (1, 7)
k) is parallel to $x = -3$ and passes through the point (–2, 5)
l) is a horizontal line and passes through the point (–10, 5.8)
m) is parallel to $y = 6$ and passes through the point (8, 18)

n) has a slope of –1 and has an x-intercept of 7
o) is perpendicular to $x = -3$ and passes through the point (3, 4)
p) is perpendicular to $y = -4$ and passes through the point (0, –6)

ANSWERS
c) $y = \dfrac{2}{3}x - 8$
d) $y = -\dfrac{1}{5}x + 5$
e) $y = 3x + 7$
f) $y = 2x + 8$
g) $y = -\dfrac{1}{2}x + 7$
h) $y = \dfrac{1}{2}x + 5$
i) $y = -\dfrac{1}{3}x - 4$
j) $x = 1$
k) $x = -2$
l) $y = 5.8$
m) $y = 18$
n) $y = -x + 7$
o) $y = 4$
p) $x = 0$