3(a)	force per unit mass
3(b)(i)	$F = GMm / x^2$
	$g = F / m$ $g = [GMm / x^2] / m = GM / x^2$ **and** G = gravitational constant
3(b)(ii)	arrow drawn at P pointing directly towards the point mass
3(b)(iii)	fields are in opposite directions
	field strength at Q is four times the field strength at P
3(c)	line starting at $(R, -g_0)$ and ending at $(L - R, +g_0)$
	line passing through $(L / 2, 0)$
	curve becoming shallower from R to $(L / 2)$ and then steeper from $(L / 2)$ to $(L - R)$

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1(a)	force per unit mass
1(b)(i)	radial
	towards (centre of) planet
1(b)(ii)	(changes in) height (very) much smaller than radius
	$(\text{radius} + \text{height})^2 \approx \text{radius}^2$ **or** field lines are approximately parallel
1(c)(i)	$9.81 \times R^2 = 3.99 \times 10^{14}$
	$R = 6.38 \times 10^6$ m
1(c)(ii)	gravitational potential $= -(GM / R)$ $= -(3.99 \times 10^{14}) / (6.38 \times 10^6)$
	$= -6.25 \times 10^7\ \text{J kg}^{-1}$
1(d)	potential (energy) zero at infinite separation
	(gravitational) force is attractive