1(a)	arrow vertically downwards labelled 'weight' and arrow perpendicular to cone, inwards and upwards, labelled 'normal contact force'
1(b)	vertical component of contact force = weight (so no resultant force vertically)
	horizontal component of contact force is resultant force towards centre (of circle)
1(c)	$a = v^2 / r$
	$a = g \tan 52°$
	$9.81 \times \tan 52° = v^2 / 0.15$ leading to $v = 1.4\ \text{m s}^{-1}$
1(d)	$v = r\omega$ or $a = r\omega^2$
	$\omega = 1.4 / 0.15$ or $\sqrt{(9.81 \times \tan 52° / 0.15)}$ $= 9.3\ \text{rad s}^{-1}$
1(e)	same resultant force / same acceleration so v^2 is proportional to r (so if speed increases radius must also increase)