3.2) Finding probabilities for normal distributions

Worked example	Your turn
IQ is distributed using $X \sim N(100,15^2)$. Find (a) $P(X < 91)$ (b) $P(X \geq 107)$ (c) $P(80 < X < 90)$ (d) $P(X < 86 \ or \ X > 112)$	IQ is distributed using $X \sim N(100,15^2)$. Find (a) $P(X < 109)$ (b) $P(X \geq 93)$ (c) $P(110 < X < 120)$ (d) $P(X < 80 \ or \ X > 106)$ a) 0.7257 (4 dp) b) 0.6796 (4 dp) c) 0.1613 (4 dp) d) 0.4358 (4 dp)

Worked example	Your turn
IQ is distributed using $X \sim N(100, 15^2)$. Adults scoring at least 131 on an IQ test are eligible to join Mensa. Thirty adults take the test. Find the probability that at least three of them are eligible to join.	IQ is distributed using $X \sim N(100, 15^2)$. Adults scoring more than 140 on an IQ test are classified as genius. Twenty adults take the test. Find the probability that at least two are classified as genius.
	0.00266 (3 sf)