Marked example 3

Paper 1 style · No calculator

3 4 marks SL 4.9 ●●○ Typical

A random variable X is normally distributed with mean 20. It is given that $P(X > 24) = 0.15$.

(a) Write down $P(X < 16)$. **[1]**

(b) Find $P(16 < X < 24)$. **[2]**

(c) Find $P(X > 16)$. **[1]**

MARKSCHEME (a)

0.15 **A1**

Total 1 mark

Note 16 and 24 are symmetric about 20.

MARKSCHEME (b)

$1 - 0.15 - 0.15$ **(M1)**

$= 0.7$ **A1**

Total 2 marks

MARKSCHEME (c)

$1 - 0.15 = 0.85$ **A1**

Total 1 mark

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