

Question			Answer	Marks	AOs	Guidance	
12			<p>use of contingency table or Venn diagram or  <math>P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)</math></p> <p><math>P(A \text{ and } B) = 0.5</math></p> <p><math>P(A) \times P(B) = 0.56 \times 0.80</math></p> <p><math>= 0.448</math> seen</p> <p><math>0.448 \neq 0.5</math> or <math>0.56 \times 0.80 \neq 0.5</math> so not independent</p>	<p><b>M1</b></p> <p><b>A1</b></p> <p><b>M1</b></p> <p><b>A1</b></p> <p><b>A1</b> [5]</p>	<p><b>3.1b</b></p> <p><b>2.1</b></p> <p><b>1.1</b></p> <p><b>1.1</b></p> <p><b>3.2a</b></p>	<p>0.56, 0.8 and 0.14 must be correctly placed; eg  <math>1 - 0.14 = 0.56 + 0.8 - P(A \text{ and } B)</math></p> <p>or <math>P(A/B) = \frac{0.5}{0.80}</math></p> <p><math>= 0.625</math> or <math>\frac{5}{8}</math> seen</p> <p><math>0.625</math> or <math>\frac{5}{8} \neq 0.56</math></p>	<p>where <math>A</math> denotes “passing” maths and <math>B</math> denotes “passing” English</p> <p>the first <b>M1A1</b> may be awarded for working with percentages</p> <p>allow equivalent argument based on showing <math>A'</math> and <math>B'</math> not independent</p>