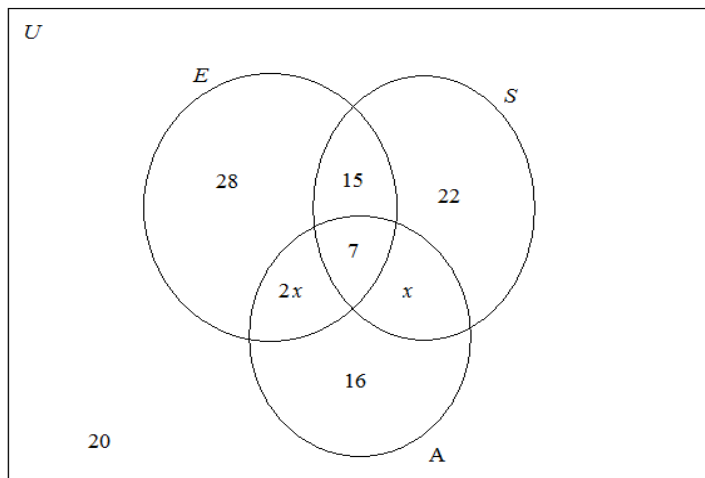


1.2 (a)



(A1)(A1)(A1)(A1)(A1) [5 marks]

Notes: Award (A1) for rectangle and three labelled intersecting circles.
Award (A1) for 7 in correct place.
Award (A1) for 28, 22 and 16 in the correct places.
Award (A1) for 15, x and $2x$ in the correct places.
Award (A1) for 20 in the correct place.
Accept 4 and 8 instead of x and $2x$.
Do not penalize if U is omitted from the diagram.

(b) $3x = 120 - (20 + 28 + 15 + 22 + 7 + 16)$ (M1)

Note: Award (M1) for setting up a correct equation involving x , the 120 and values from their diagram.

$x = 4$ (A1)(ft)(G2) [2 marks]

Note: Follow through from part (a). For the follow through to be awarded x must be a positive integer.

(c) (Women who had visited) Europe **or** South America and (but had) **not** (visited) Asia (A1)(A1) [2 marks]

Notes: Award (A1) for “(visited) Europe **or** South America” (or both).
Award (A1) for “and (but) had **not** visited Asia”.
 $E(\text{urope}) \cup S(\text{outh America})$ intersected with not $A(\text{sia})$ earns no marks, (A0).

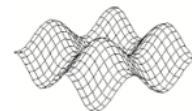
(d) 20 (A1) [1 mark]

Note: Award (A0) for the embedded answer of $n(20)$.

(e) $\frac{58}{120} \left(\frac{29}{60}, 0.483, 48.3\% \right) (0.48333\dots)$ (A1)(ft)(A1)(G2) [2 marks]

Note: Award (A1)(ft) for numerator, follow through from their value of x , or their diagram, (A1) for denominator.

continued...



Question 1.2 continued

(f) $\frac{15}{35} \left(\frac{3}{7}, 0.429, 42.9\% \right) (0.428571\dots)$ (A1)(ft)(A1)(ft)(G2) [2 marks]

Note: Award (A1)(ft) for numerator, (A1)(ft) for denominator, follow through from their value of x or their diagram.

(g) $\frac{48}{120} \times \frac{47}{119}$ (A1)(ft)(M1)

Notes: Award (A1)(ft) for two correct fractions, follow through from their denominator in part (e), follow through the numerator from their answer to part (b) or from their diagram, (M1) for multiplication of their two fractions.

$= \frac{2256}{14280} \left(\frac{94}{595}, 0.158, 15.8\% \right) (0.157983\dots)$ (A1)(ft)(G2) [3 marks]

Notes: Award (A1)(M1)(A1) for correct fractions, correctly multiplied together with an answer of 0.16.

Award (A0)(M1)(A0) for $\frac{48}{120} \times \frac{48}{120} = 0.16$.

Award (G1) for an answer of 0.16 with no working seen.

Total: [17 marks]