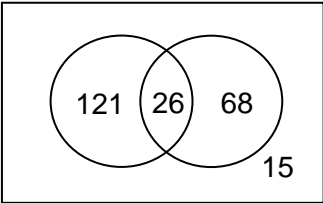


# Topic Test 1 Mark Scheme

## Probability - Higher

Q	Answer	Mark	Comments
1	$\frac{1}{10}$	B1	
2(a)	15 inside the rectangle but outside the circles	B1	
	147 in total in F and 94 in total in S	B1	
	26 in the overlap	B1	
	Fully correct: 		
2(b)	$\frac{68}{230}$	B1	oe
3	$\frac{20}{100} \times \frac{20}{100}$	M1	May be on tree diagram
	$\frac{4}{100}$ or 4%	A1	oe fraction, decimal or percentage
4(a)	Correctly plots (100, 0.16)	B1	
4(b)	$0.1 \times 20\ 000$	M1	oe
	2000	A1	
5(a)	$1 - a$	B1	
5(b)	$(1 - a)(1 - b)$	B2	B1 $1 - b$ seen

Q	Answer	Mark	Comments
6(a)	25 + 30 + 20 + 45 or 120	M1	
	$\frac{45}{120}$	A1	oe fraction, decimal or percentage
6(b)	$\frac{(25 + 30)}{120} \times \frac{(20 + 45)}{119}$ or $\frac{(25 + 30)}{120} \times \frac{(120 - \text{their } 55)}{119}$ or $\frac{3575}{14280}$	M1	oe ft their 120 from (a)
	$\frac{55}{120} \times \frac{65}{119} \times 2$	M1	oe
	$\frac{7150}{14280}$	A1	oe fraction, decimal or percentage
			SC2 $\frac{7150}{14400}$
7(a)	28	B1	
7(b)	$\frac{27}{40}$	B1	oe fraction, decimal or percentage
7(c)	$\frac{32}{60}$	B1	oe fraction, decimal or percentage