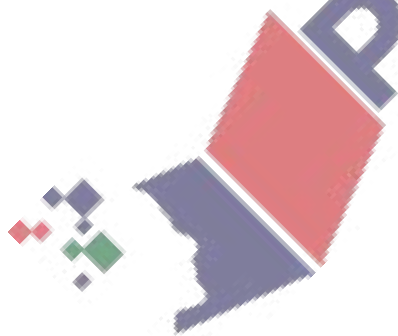# Topical Worksheets for Cambridge O LEVEL Mathematics D (4024)

Statistics

Mark Scheme

1st edition, for examination until 2025

Question	Answer	Marks	AO Element	Notes	Guidance
1	12.8 4.4 0.8	**3**		**B2** for 2 correct heights or 3 correct frequency densities or **B1** for 1 correct height or 2 correct frequency densities	
2(a)(i)	$1.5 < h \leqslant 1.6$	**1**			
2(a)(ii)	1.62 or 1.623… nfww	**4**		**M1** for 1.35, 1.45, 1.55, 1.65, 1.75 1.85 soi **M1** for Σfx **M1 dep** for *their* $\Sigma fx \div$ 120	
2(b)(i)	$\frac{14}{120}$ oe	**1**			

Question	Answer	Marks	AO Element	Notes	Guidance
2(b)(ii)	$\dfrac{21}{20060}$ oe	4		**M3** for $3\left(\dfrac{14}{120}\times\dfrac{7}{119}\times\dfrac{6}{118}\right)$ or **M2** for $\dfrac{14}{120}\times\dfrac{7}{119}\times\dfrac{6}{118}$ isw or **M1** for $\dfrac{14}{120}$, $\dfrac{7}{119}$, $\dfrac{6}{118}$ After 0 scored, **SC1** for answer $\dfrac{343}{864000}$ or $\dfrac{343}{288000}$ oe	
2(c)(i)	55, 79, 106, 120	2		**B1** for 2 or 3 correct	
2(c)(ii)	Correct diagram	3		**B1** for correct horizontal plots **B1FT** for correct vertical plots **B1FT dep on at least B1** for reasonable increasing curve or polygon through *their* 6 points If 0 scored **SC1** for 5 out of 6 points correctly plotted	

Question	Answer	Marks	AO Element	Notes	Guidance
2(d)(i)	1.62 to 1.63	1			
2(d)(ii)	1.57 to 1.58	2		**B1** for 48 soi	
3	Correct histogram	4		**B1** for each correct block If 0 scored, **SC1** for 5, 20, 24, 1 seen	
4	16.6 or 16.60 to 16.61 nfww	4		**M1** for 5, 12.5, 17.5, 22.5, 30 soi **M1** for Σfx where x is in correct interval, including boundaries **M1 dep** on second M1 for $$\frac{\Sigma fx}{50+85+100+120+10}$$	
5	Fully correct histogram	4		**B1** for each correct bar If 0 scored, **SC1** for frequency densities of 5.4, 4.2, 0.8 and 0.45 seen	
					[Total: 33]