

# Decision Maths Homework E Solutions

1. Odd vertices B, C, D, G ✓

BC + DE <sup>E</sup>      BC + DEG      95 + 145 = 240 ← choose ✓

BD + CG <sup>E</sup>      BCD + GEC      169 + 179 = 348 ✓

BG + CD      BFG + CD      249 + 74 = 323

Repeat BC, DE + EG.

eg. ABCBFHGFEGECDEDA. ✓ length 1241 + 240 = 1481 (m)  
 Odd vertices B, D, F, G ✓

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2. (a)	BD + FG = 1.3 + 0.9 = 2.2* ✓	M1
	BF + DG = 1.5 + (1.3 + 0.7) = 3.5 ✓	A1
	BG + DF = 0.7 + (0.9 + 0.8) = 2.4 ✓	A1
	Repeat BD and FG	
13 vertices	Route e.g. GABCDBFEDBGFG ✓	B1
	Length = 8.9 + 2.2 = 11.1 km ✓ ✓	M1 A1
(b)	<u>Correct.</u> Only now need to repeat <u>BF</u> of length 1.5 < 2.2 ✓ ✓	M1 A1 ✓
9	Length = 8.9 + 1.5 = 10.4 km saving 0.7 (km) ✓	A1 ✓ 9