19	$\frac{(BD)}{\sin 62} = \frac{12.8}{\sin 40}$ oe or		5	M1 for correct use of sine rule for *BD*	M2 for $(CD =) \frac{12.8}{\sin 40} \times \sin 78$ (= 19.4(781…)) **and** $(BD =) \frac{"19.4(781...)"}{\sin 78} \times \sin 62$ (= 17.5(82…))
	$(BD =) \frac{12.8}{\sin 40} \times \sin 62$ (= 17.5(82…))			M1 for finding *BD* (truncated or rounded)	
	$"17.5(82...)"^2 = 13.4^2 + 15.2^2 - 2 \times 13.4 \times 15.2 \times \cos x$ or 309(.139) = 179(.56) + 231(.04) – 407(.36)cos*x* oe			M1 for correct use of cosine rule	
	$(\cos x =) \frac{13.4^2 + 15.2^2 - "17.5(82...)"^2}{2 \times 13.4 \times 15.2}$ oe or $(\cos x =) \frac{179(.56) + 231(.04) - 309(.139...)}{407(.36)}$ oe or $(\cos x =) \frac{410(.6) - 309(.139...)}{407(.36)}$ oe or $(\cos x =) 0.247 - 0.256$ oe			M1 for a correct rearrangement of cos *x*	
	Working not required, so correct answer scores full marks (unless from obvious incorrect working)	75.6		A1 accept 75.1 – 75.7	
					Total 5 marks