22		$[AM =]\sqrt{5^2+15^2}\,(=\sqrt{250}=15.8...)$ where M is midpoint of EF, oe other correct method to find AM $[AD =]\sqrt{12^2+15^2}\,(=\sqrt{369}=19.2...)$ $[DM =])\sqrt{12^2-5^2}\,(=\sqrt{119}=10.9...)$		4	M2	for a complete method to find **two** of AM, AD, DM (where M is the midpoint of EF) Other longer ways to find AM, AD, DM may be used but must be a complete method eg $\angle DEM = \cos^{-1}(\frac{5}{12})(=65.37...)$ **and** $DM = 12\sin 65.37...$ $\angle DEM = \cos^{-1}(\frac{5}{12})(=65.37...)$ **and** $DM = 5\tan 65.37...$ Use 10 ÷ 2 as 5 throughout
					(M1	For a complete method to find **one** of AM, AD, DM (where M is the midpoint of EF))
		eg tan $DAM = \frac{"\sqrt{119}"}{"\sqrt{250}"}\left(=\frac{"10.9..."}{"15.8..."}\right)$ oe **or** sin $DAM = \frac{"\sqrt{119}"}{"\sqrt{369}"}\left(=\frac{"10.9..."}{"19.2..."}\right)$ oe **or** cos $DAM = \frac{"\sqrt{250}"}{"\sqrt{369}"}\left(=\frac{"15.8..."}{"19.2..."}\right)$ oe			M1	a correct method to find the required angle –other longer methods may be used but they must get to the stage of an equation for the required angle eg $\sin DAM = \frac{"10.9..."}{\sqrt{"15.8..."^2+"10.9..."^2}}$ NB: "10.9…" and "15.8…" must come from correct working
		Working not required, so correct answer scores full marks (unless from obvious incorrect working)	34.6		A1	any answer which rounds to 34.6
						Total 4 marks