Question		Working	Answer	Mark	Notes
25		$(FB=)\ \dfrac{12}{\sin 30}(=24)$ oe **or** $(FB=)\ \dfrac{12\sin 90}{\sin 30}(=24)$ **or** $(AB=)\ \dfrac{12}{\tan 30}(=12\sqrt{3}=20.78...)$ **and** $(FB=)\ \sqrt{12^2+"(12\sqrt{3})"^2}\ (=24)$		5	M1 method to find an expression for the length of *FB*
		$(BT=)\ \dfrac{2}{3}\times"24"(=16)$			M1 dep on M1 for using the ratio 3 : 2 to find an expression for the length of *BT*
		$(FT=)\ \sqrt{"24"^2+"16"^2}\ (=8\sqrt{13}=28.8...)$ oe **or** $(FT=)\ \sqrt{"24"^2+"16"^2-2\times"24"\times"16"\times\cos 90}(=8\sqrt{13}=28.8...)$ oe **or** $(AT=)\ \sqrt{"(12\sqrt{3})"^2+"16"^2}\ (=4\sqrt{43}=26.2...)$ oe **or** $(AT=)\ \sqrt{"(12\sqrt{3})"^2+"16"^2-2\times"(12\sqrt{3})"\times"16"\times\cos 90}(=4\sqrt{43}=26.2...)$ oe			M1 dep on first M1 for a complete method to find an expression for the length of *FT* or *AT* ft their value of *BT* from incorrect use of the ratio
		$\sin ATF=\dfrac{12}{"8\sqrt{13}"}$ oe or $\tan ATF=\dfrac{12}{"4\sqrt{43}"}$ oe or $\cos ATF=\dfrac{"4\sqrt{43}"}{"8\sqrt{13}"}$ oe			M1 dep on M2 method to find sin *ATF* **or** cos *ATF* **or** tan *ATF* ft their value of *FT* or *AT* from their value of *BT* from incorrect use of the ratio
		Working required	24.6		A1 dep on M2 for answer in the range 24.5 to 24.7
					Total 5 marks