2. Using sine rule: $\frac{\sin B}{5} = \frac{\sin 48^\circ}{7}$ *(M1)(A1)*

$\Rightarrow \quad \sin B = \frac{5}{7}\sin 48^\circ = 0.5308\ldots$ *(M1)*

$\Rightarrow \quad B = \arcsin(0.5308) = 32.06^\circ$ *(M1)(A1)*

$= 32^\circ$ (nearest degree) *(A1)* *(C6)*

Note: Award a maximum of ***[5 marks]*** if candidates give the answer in radians (0.560).

[6 marks]

QUESTION 2

(a) (i) A is $\left(\frac{4}{3}, 0\right)$ *A1 A1* *C2*

(ii) B is $(0, -4)$ *A1 A1* *C2*

Notes: In each of parts (i) and (ii), award ***C1*** if A and B are interchanged, ***C1*** if intercepts given instead of coordinates.

(b) Area $= \frac{1}{2} \times 4 \times \frac{4}{3}$ *M1*

$= \frac{8}{3} (= 2.67)$ *A1* *C2*

QUESTION 1

(a) Angle $A = 80^\circ$ *(A1)*

$\frac{AB}{\sin 40^\circ} = \frac{5}{\sin 80^\circ}$ *(M1)*

$AB = 3.26$ cm *(A1)* *(C3)*

(b) Area $= \frac{1}{2}ac\sin B = \frac{1}{2}(5)(3.26)\sin 60^\circ$ *(M1)(A1)*

$= 7.07$ (accept 7.06) cm^2 *(A1)* *(C3)*

Note: Penalize once in this question for absence of units.

QUESTION 1

Using area of a triangle $= \frac{1}{2}ab\sin C$ *(M1)*

$20 = \frac{1}{2}(10)(8)\sin Q$ (accept any letter for Q) *(A1)(A1)(A1)*

$\sin Q = 0.5$ *(A1)*

$\hat{PQR} = 30^\circ$ or $\frac{\pi}{6}$ or 0.524 *(A1)* *(C6)*