

# Lecture 8 - Homework

**Question 1.** Homework sheet Q3, Q6, Q8.

**Question 2.** Homework sheet Q9a), Q10a).

**Question 3.** Homework sheet Q11, Q12, Q13, Q14, Q16.

**Question 4.** Determine the value of the following,

(a)  $\cos 60^\circ \sin 30^\circ + \tan 30^\circ \csc 60^\circ$

(b)  $(\cos 45^\circ)^2 + (\sin 45^\circ)^2$

(c)  $\cos 30^\circ \sec 30^\circ + \tan 30^\circ \sin 60^\circ$

(d)  $\sec 30^\circ \csc 60^\circ + 2(\cot 30^\circ)^2$ .

**Question 5.** Homework sheet Q31, Q33, Q36.

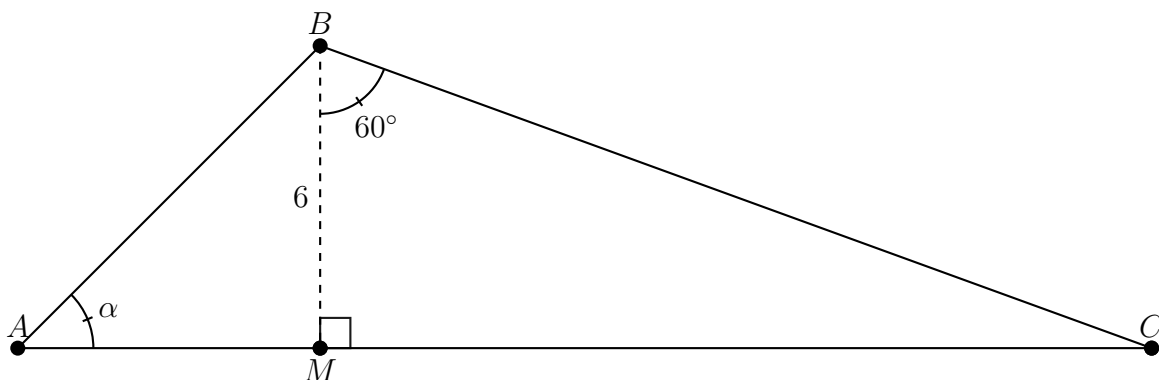
**Note:** When they say solve the triangle, they mean determine **all** unknown angles and sides.

**Note:**  $\pi/6 = 30^\circ$ .

**Question 6.** Homework sheet Q41, Q42, Q44.

**Question 7.** (The following problem is from the updated Nelson Functions 11).

(a)  $\triangle ABC$ ,  $BM = 6$ ,  $\angle MBC = 60^\circ$  and  $\tan \alpha = 1$ . Determine the **exact** area of  $\triangle ABC$ .



(b)  $\triangle SPQ$ ,  $SP = 13$ ,  $\angle PQS = 45^\circ$  and  $\cos \beta = \sqrt{3}/2$ . Determine the **exact** area of  $\triangle SPQ$ .

