Trigonometry

Q1. State the two angles between 0^0 and 360^0 for each of these cosine values.

a. 0.4 b. 0.78 c. 0.438 d. 0.585

_____ _____ _____ _____

e. -0.361 f. -0.925 g. 0.147 h. 0.784

_____ _____ _____ _____

Q2 i. Write down the sine of each of these angles.

a 135° **b** 269° **c** 305° **d** 133°

_____ _____ _____ _____

Q3 ii. Write down the cosine of each of these angles.

a 129° **b** 209° **c** 95° **d** 357°

_____ _____ _____ _____

Q4. Write down the two possible values of x ($0° < x < 360°$) for each equation. Give your answers to one decimal place.

a $\sin x = 0.361$, x=_____ **b** $\sin x = -0.486$, x=_____

c $\sin x = 0.874$, x=_____ **d** $\cos x = 0.874$, x=_____

Q5. Find two angles such that the sine of each is 0.5. $\cos 41° = 0.755$. What is $\cos 139°$?

Write down the value of each of the following, correct to three significant figures.

a $\sin 50° + \cos 50°$ =_____ **b** $\cos 120° - \sin 120°$ =_____

c $\sin 114° - \sin 210°$ =_____ **d** $\cos 123° + \sin 177°$ =_____

Q6. It is suggested that $(\sin x)^2 + (\cos x)^2 = 1$ is true for all values of x. Test out this suggestion to see if you agree.

Q7. Suppose the sine key on your calculator is broken, but not the cosine key. Show how you could calculate these.

a $\sin 25°$ =_____ **b** $\sin 130°$ =_____

Q8. Find a solution to each of these equations.

a $\sin (x + 20°) = 0.5$ x=_____

b $\cos (5x) = 0.45$ x=_____