SPTA
Higher Homework
Compound Angle (B)

1. If P and Q are acute angles with $\tan P = \frac{3}{4}$ and $\tan Q = \frac{1}{7}$, show that $\cos(P+Q) = \frac{1}{\sqrt{2}}$ **(4)**

2. Use the addition formula to calculate the exact value for $\sin 75°$ **(4)**

3. Solve $\sin 2x° - \cos x° = 0$ for $0 \leq x \leq 2\pi$ **(4)**

4. Solve the equation $5\cos 2x° - \cos x° + 2 = 0$ in the interval $0 \leq x \leq 360$ **(4)**

5. Prove that $\frac{\cos(x-y)}{\cos x \cos y} = 1 + \tan x \tan y$ **(3)**

6. Show that $\cos(30 - x)° + \sin(120 + x)° = \sqrt{3}\cos x°$ **(4)**

7. If $\cos 2A = \frac{7}{25}$, where A is an acute angle, calculate the exact value of $\sin A$ **(4)**