

Sum or Difference of Angles Worksheet 2

1. Find $\sin(75^\circ)$

$$\sin(A + B) = \sin A \cos B + \cos A \sin B$$

2. Find $\sin(30^\circ)$

$$\sin(A - B) = \sin A \cos B - \cos A \sin B$$

3. Find $\cos(75^\circ)$

$$\cos(A + B) = \cos A \cos B - \sin A \sin B$$

4. Find $\cos(15^\circ)$

$$\cos(A - B) = \cos A \cos B + \sin A \sin B$$

5. Find $\sin(2 \times 30^\circ)$

$$\sin(2A) = 2\sin A \cos A$$

6. Find $\cos(2 \times 45^\circ)$

$$\cos(2A) = \cos^2 A - \sin^2 A = 2\cos^2 A - 1 = 1 - 2\sin^2 A$$

7. Find $\frac{1}{2} \sin(22^\circ)$

$$\sin\left(\frac{A}{2}\right) = \pm \sqrt{\frac{1 - \cos A}{2}}$$

8. Find $\frac{1}{2} \cos(22^\circ)$

$$\cos\left(\frac{A}{2}\right) = \pm \sqrt{\frac{1 + \cos A}{2}}$$