**7F Trig Identities with Double Angles formulae**

1. Show that:

$$2sin\frac{θ}{2}cos\frac{θ}{2}cosθ≡\frac{1}{2}sin2θ$$

1. Show that:

$$1+cos4θ≡2cos^{2}2θ$$

1. Prove the Identity:

$$tan2θ≡\frac{2}{cotθ-tanθ}$$

1. Prove the Identity:

$$\sqrt{3}cos4θ+sin4θ≡2cos\left(4θ-\frac{π}{6}\right)$$