Name:

Level 2 Further Maths

Trigonometric Identities

Corbettmaths

Ensure you have: Pencil or pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Revision for this topic

www.corbettmaths.com/more/further-maths/

1. Prove $tan\theta cos\theta \equiv sin\theta$

(2)

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2. Show that $2 - 2cos^2x$ is equivalent to $2sin^2x$

(2)

3. Prove $sin^2x - cos^2x \equiv 1 - 2cos^2x$

(2)

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4. Prove that $sin\theta - sin\theta cos^2\theta \equiv sin^3\theta$

(3)

4. Prove that $sin^2\theta - cos\theta \sin\theta tan\theta \equiv 0$

(3)

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5. In this question, $cosx \neq 0$

Show that $\frac{1}{cos^2x} - tan^2x$ is equal to 1

(3)

6. Prove $(sin\theta + cos\theta)^2 + (sin\theta - cos\theta)^2 \equiv 2$

(3)

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7. Prove $tan\theta sin\theta + cos\theta \equiv \frac{1}{cos\theta}$

(3)

8. Prove $\frac{\sqrt{1-cos^2x}}{cosx} \equiv tanx$

(3)

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9. Prove $\frac{1}{tan\theta} + tan\theta \equiv \frac{1}{cos\theta sin\theta}$

(3)

10. Show that $\frac{cos\theta}{1-cos\theta} - \frac{cos\theta}{1+cos\theta}$ is equivalent to $\frac{2}{tan^2x}$

(3)