

Why was the mathematician late for work?

Use double angle identities to simplify each expression. Write the letter that corresponds to each answer in the space below matching the question number.

1. $\frac{\sin 2\theta}{2 \sin^2 \theta}$

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

2. $\sin 2\theta \sec \theta$

7. $\frac{\sin 2\theta}{2 \sin \theta}$

3. $2 \sin^2 \theta + \cos 2\theta$

8. $\frac{2 \tan \theta}{1 + \tan^2 \theta}$

4. $\frac{\sin^2 \theta}{\sin 2\theta}$

9. $(\cos \theta + \sin \theta)(\cos \theta - \sin \theta)$

5. $\frac{\sin 2\theta}{2 \tan \theta}$

10. $(\tan 2\theta)(1 - \tan^2 \theta)$

| Answer | Letter |
|-------------------------|--------|
| $2 \sin \theta$ | B |
| $\cot \theta$ | E |
| $\sin 2\theta + 1$ | H |
| $2 \tan \theta$ | K |
| 1 | M |
| $\cos 2\theta$ | O |
| $\cos \theta$ | R |
| $\frac{\tan \theta}{2}$ | S |
| $\sin 2\theta$ | T |
| $\cos^2 \theta$ | U |

6 1 8 9 9 10 8 6 1 7 6 9 3 2 5 4

M + A + T + H = *love*

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