

Trigonometry 2 : Using Identities to Solve Eqns

- 1) June 2012
Solve in the range $0^\circ \leq \theta \leq 360^\circ$
$$13 \tan^2 \theta = 5 \sec^2 \theta + 6 \tan \theta$$
- 2) January 2011
Solve in the range $0^\circ \leq \theta \leq 360^\circ$
$$3 \operatorname{cosec}^2 \theta = 11 - 2 \cot \theta$$
- 3) January 2013
Solve in the range 0° to 360°
$$4 \operatorname{cosec}^2 \theta = 9 - 8 \cot \theta$$
- 4) June 2007
Find all values of θ in the range $0^\circ \leq \theta \leq 360^\circ$ satisfying
$$\cot^2 \theta = 7 - 2 \operatorname{cosec} \theta$$
- 5) January 2009
Solve in the range $0^\circ \leq \theta \leq 360^\circ$
$$3 \tan^2 \theta = 7 + \sec \theta$$
- 6) June 2010
Solve in the range $0^\circ \leq \theta \leq 360^\circ$
$$2 \tan^2 \theta = \sec \theta + 8$$
- 7) June 2015
Solve in the range 0° to 360°
$$7 \operatorname{cosec}^2 \theta - 4 \cot^2 \theta = 16 + 5 \operatorname{cosec} \theta$$
- 8) June 2016
Solve in the range $0^\circ \leq \theta \leq 360^\circ$
$$3 \operatorname{cosec} \theta (\operatorname{cosec} \theta - 1) = 5 \cot^2 \theta - 9$$

9) January 2010 -

Solve in the range 0° to 360°

$$3\sec^2\theta = 7 - 11\tan\theta$$

10) June 2017

Find all values of θ in the range $0^\circ \leq \theta \leq 360^\circ$ satisfying

$$6\tan^2\theta - 6 = 4\sec^2\theta + 5\sec\theta$$

11) New Exam Specimen Paper

Solve the equation

$$\operatorname{cosec}^2 x + \cot^2 x = 3$$

for $0^\circ \leq x \leq 360^\circ$