Name:

Level 2 Further Maths



Trigonometric Equations 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.	Solve	$sin\theta = 0.75$ for $0^{\circ} \le \theta \le 180^{\circ}$	
			(2)
	0.1		
2.	Solve	$tan\theta = 1.4$ for $0^{\circ} \le \theta \le 360^{\circ}$	
			(2)
			\
3.	Solve	$cos\theta = -0.9$ for $0^{\circ} \le \theta \le 360^{\circ}$	
			(2)

4.	Solve	$2tan\theta = 1.44$ for $0^{\circ} \le \theta \le 360^{\circ}$
		(3)
		(0)
5.	Solve	$3\cos\theta = 1$ for $0^{\circ} \le \theta \le 360^{\circ}$
		(3)
		2 0 105 . 0 . 200
6.	Solve	$2 + \sin\theta = 1.05 \text{for } 0^{\circ} \le \theta \le 360^{\circ}$
		(3)

7. Solve $8\sin\theta - 5 = 0$ for $0^{\circ} \le \theta \le 360^{\circ}$

(3)

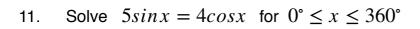
8. Solve $\cos^2 x = \frac{1}{4}$ for $0^{\circ} \le x \le 360^{\circ}$

(3)

9. Solve $64sin^2x = 25$ for $0^{\circ} \le x \le 360^{\circ}$

(4)

10. Solve $3tan^2\theta - 1 = 0$ for $0^{\circ} \le \theta \le 180^{\circ}$

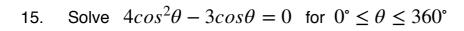


(4)

12. Solve $10\cos\theta + 4\sin\theta = 0$ for $90^{\circ} \le \theta \le 360^{\circ}$

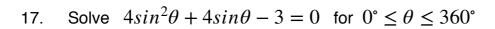
13.	Solve	$-cosx = 8sinx \text{ for } 0^{\circ} \le x \le 360^{\circ}$	
			(4)
14	Solve	$tan^2x - 2tanx = 0$ for $0^\circ < x < 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)
14.	Solve	$tan^2x - 2tanx = 0 \text{for } 0^\circ \le x \le 360^\circ$	(4)

(5)



(4)

16. Solve $2cos^2\theta - cos\theta - 1 = 0$ for $0^{\circ} \le \theta \le 360^{\circ}$



(4)

18. Solve $5tan^2\theta - 6tan\theta = -1$ for $0^{\circ} \le \theta \le 360^{\circ}$

(5)

19. (a) Prove $\cos^2 x - 2\sin^2 x \equiv 3\cos^2 x - 2$

(2)

(b) Hence, work out the values of x between 0° and 360° for which $cos^2 - 2sin^2x = 0$

20	(a)	Show that	$2\cos^2\theta \equiv 2 - 2\sin^2\theta$
∠∪.	(a)	SHOW that	$\angle cos \ o = \angle - \angle sin \ o$

(2)

(b) Hence solve $2cos^2\theta - sin\theta = 1$ for $0^{\circ} \le \theta \le 360^{\circ}$

21. Show that $3\cos^2\theta \equiv 3 - 3\sin^2\theta$

(2)

(b) Hence solve $3cos^2\theta - 5sin\theta = 1$ for $0^{\circ} \le \theta \le 360^{\circ}$

.....

22.	Solve	$6sin^2\theta + 7cos\theta - 8 = 0$	for $0^{\circ} \leq \theta \leq 360^{\circ}$

(7)