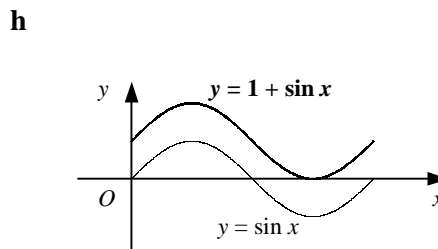
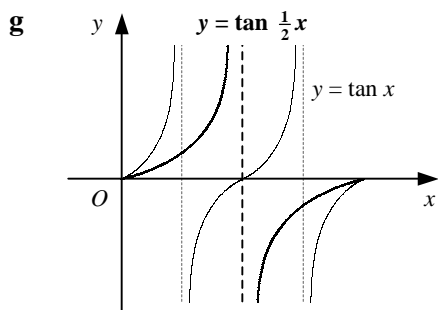
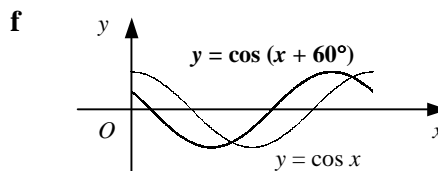
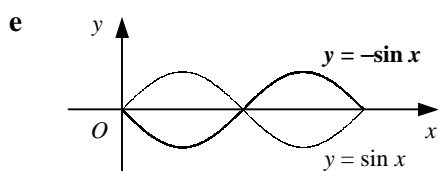
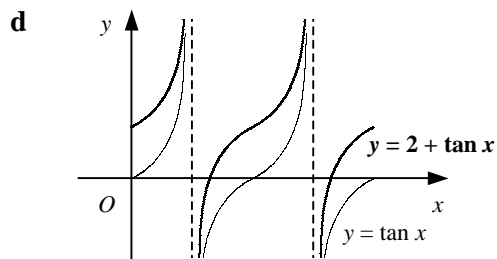
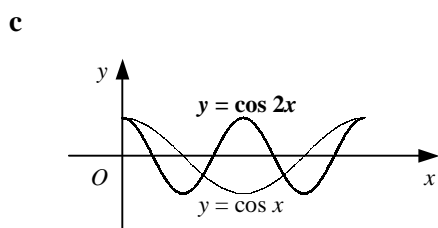
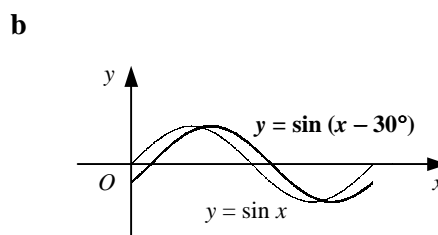
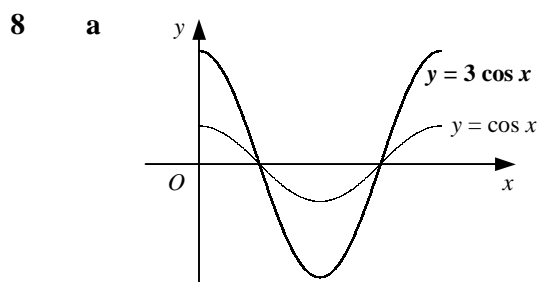


- 1 **a** 0.755 **b** -0.354 **c** 0.530 **d** -0.255
- 2 **a** = $\frac{1}{2}$ **b** = $\frac{1}{\sqrt{2}}$ **c** = 1 **d** = $\frac{\sqrt{3}}{2}$
e = 1 **f** = $\frac{1}{\sqrt{3}}$ **g** = $-\cos 60^\circ = -\frac{1}{2}$ **h** = $\sin 45^\circ = \frac{1}{\sqrt{2}}$
i = $\tan 30^\circ = \frac{1}{\sqrt{3}}$ **j** = $-\cos 45^\circ = -\frac{1}{\sqrt{2}}$ **k** = $-\sin 60^\circ = -\frac{\sqrt{3}}{2}$ **l** = $-\tan 60^\circ = -\sqrt{3}$
m = $\cos 30^\circ = \frac{\sqrt{3}}{2}$ **n** = $-\tan 30^\circ = -\frac{1}{\sqrt{3}}$ **o** = $\cos 60^\circ = \frac{1}{2}$ **p** = $\sin 45^\circ = \frac{1}{\sqrt{2}}$
q = $-\tan 45^\circ = -1$ **r** = $\sin 60^\circ = \frac{\sqrt{3}}{2}$ **s** = $\tan 30^\circ = \frac{1}{\sqrt{3}}$ **t** = $-\cos 30^\circ = -\frac{\sqrt{3}}{2}$
- 3 **a** 0.913 **b** -0.851 **c** 0.042 **d** 0.252
- 4 **a** = $\frac{1}{2}$ **b** = 0 **c** = $\frac{1}{\sqrt{2}}$ **d** = $\sqrt{3}$
e = $\frac{1}{2}$ **f** = $\sin \frac{\pi}{3} = \frac{\sqrt{3}}{2}$ **g** = $-\tan \frac{\pi}{4} = -1$ **h** = $-\cos \frac{\pi}{6} = -\frac{\sqrt{3}}{2}$
i = $-\tan \frac{\pi}{3} = -\sqrt{3}$ **j** = $-\cos \frac{\pi}{4} = -\frac{1}{\sqrt{2}}$ **k** = $-\sin \frac{\pi}{6} = -\frac{1}{2}$ **l** = $\tan \frac{\pi}{6} = \frac{1}{\sqrt{3}}$
m = $\sin 0 = 0$ **n** = $-\tan \frac{\pi}{4} = -1$ **o** = $-\cos \frac{\pi}{3} = -\frac{1}{2}$ **p** = $-\sin \frac{\pi}{3} = -\frac{\sqrt{3}}{2}$
- 5 **a** (0, 0), (180, 0), (360, 0), (540, 0), (720, 0)
b (90, 1), (270, -1), (450, 1), (630, -1)
- 6 **a** (0, 0), (180, 0), (360, 0), (540, 0), (720, 0)
b $x = 90, x = 270, x = 450, x = 630$
- 7 **a** stretch by a factor of 3 in the y -direction about the x -axis
b stretch by a factor of $\frac{1}{4}$ in the x -direction about the y -axis
c translation by 60 units in the negative x -direction
d reflection in the y -axis



9 a $(-90^\circ, -2), (90^\circ, 2)$

b $(-180^\circ, 1), (0, 3), (180^\circ, 1)$

c $(-150^\circ, -1), (-90^\circ, 1), (-30^\circ, -1), (30^\circ, 1), (90^\circ, -1), (150^\circ, 1)$

d $(-135^\circ, -1), (45^\circ, 1)$

10 a 360°

b 180°

c 360°

d 180°

e 180°

f 1080°