

1. Graph  $y = x^2$  and  $y = x^4$  over the interval  $[-2, 2]$  on the same graph. Label the points  $x = 1$  and  $x = -1$  on the  $x$ -axis.
2. Graph  $y = x^3$  and  $y = x^{\frac{1}{3}}$  on adjacent graphs (i.e on two different graphs, one next to the other).
3. Graph  $y = x^3$ ,  $y = 2x^3$  on the same graph. Label which function is which, both for  $x > 0$  and for  $x < 0$ .

4. Graph  $y = -x^2$ ,  $y = (x - 1)^2$  and  $y = (x - 1)^2 - 1$  on adjacent graphs.
5. Graph  $y = \sqrt{x}$ ,  $y = \sqrt{x - 1}$ , and  $y = \sqrt{-x}$  on adjacent graphs.
6. Graph  $y = \sin(x)$  and  $y = \cos(x)$  on the same graph over the interval  $[0, 4\pi]$ . Label the points  $0$ ,  $\pi/2$ ,  $\pi$ ,  $3\pi/2$  and  $2\pi$  on the  $x$ -axis.

7. Graph  $y = \sin(2x)$  and  $y = 2\sin(x)$  over the interval  $[0, 2\pi]$  on the same graph. Label the points  $0, \pi/2, \pi, 3\pi/2$  and  $2\pi$  on the  $x$ -axis.
8. Graph  $-2\cos(x)$  and  $3 - 2\cos(x)$  on adjacent graphs. Label the points  $0, \pi/2, \pi, 3\pi/2$  and  $2\pi$  on the  $x$ -axis.
9. Graph  $y = \cos(x)$  and  $y = |\cos(x)|$  over the interval  $[0, 2\pi]$  on the same graph. Label the points  $0, \pi/2, \pi, 3\pi/2$  and  $2\pi$  on the  $x$ -axis.

10. Graph  $y = 3 - 2|\cos(x)|$ .

11. Graph  $y = \tan(x)$  and  $y = \tan\left(x - \frac{\pi}{2}\right)$  over the interval  $[0, 2\pi]$  on adjacent graphs.

12. Graph  $y = \sin(x^2)$  and  $y = \sin(1/x)$  on adjacent graphs.