

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

5. Graph  $y = \sin(|x|)$  and  $y = |\sin(x)|$  over the interval  $[-2\pi, 2\pi]$  on adjacent graphs.
6. Graph  $y = (0.1)^x$ ,  $y = e^x$ ,  $y = 2e^x$  on the same graph.
7. Graph  $y = e^{-|x|}$ .
8. Graph  $y = \sin(x^2)$  and  $y = \sin(1/x)$  on adjacent graphs. *(challenging)*