

(1) Solve $|4x - 4| < .1$

(2) Solve $|2x + 1| < .2$

(3) For $x \geq 0$, let $h(x) = \max(\sqrt{x}, x)$.

(a) Write $h(x)$ in case form.

(b) Sketch its graph.

(4) Sketch the graphs of the following curves.

(a) $y = 2^x$

(b) $y = \left(\frac{1}{2}\right)^x$

(c) $\sin x$

(d) $\cos x$

(e) $\arctan x$

(f) $\frac{x^2 - 9}{x + 3}$

(5) What is the maximum point of $y = \frac{1}{x^2 + 8x + 17}$?

(6) Factor

(a) $x^2 + 2x - 3$

(b) $x^2 + 2x - 1$

(c) $x^2 + 2x + 2$

(d) $x^3 - 125$

(e) $x^3 + 1$

(f) $8x^3 + 27$

(7) Graph $y = \cos \frac{1}{x}$.