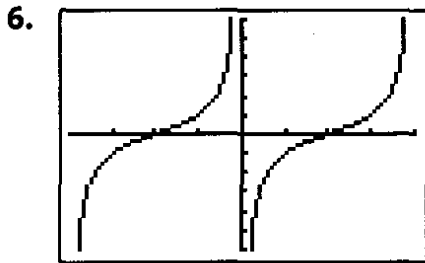


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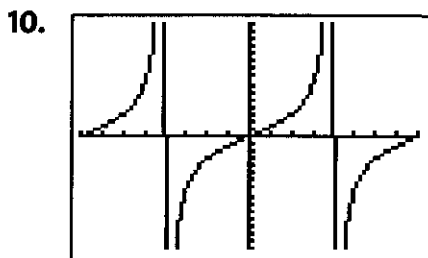
p.403 1-39(skip 4's), 46

2. The graph of $y = 5 \tan x$ must be vertically stretched by 10 c
so $y_1 = 5 \tan x$ and $y_2 = 0.5 \tan x$.



$[-\frac{\pi}{3}, \frac{\pi}{3}]$ by $[-6, 6]$

Horizontal shrink of $y = \cot x$ by factor $1/3$,
reflected across x -axis; asymptotes at multiples of $\pi/3$



$[-2\pi, 2\pi]$ by $[-15, 15]$

Horizontal stretch of $y = \tan x$ by
factor 2, vertical stretch by factor 3;
asymptotes at odd multiples of π

14. Domain: All reals except odd multiples of $\frac{\pi}{2}$.

Range: $(-\infty, -1] \cup [1, \infty)$

Not Continuous

Even

Unbounded both above and below

Local minimum of 1 at each even multiple of π

Local maximum of -1 at each odd multiple of π

VA: $x = \frac{k\pi}{2}$ for all odd integers k

End Behavior: does not exist

18. Graph (d); $X_{\min} = -\pi$ and $X_{\max} = \pi$

22. Starting with $y = \tan x$, reflect across x -axis.

26. Starting with $y = \sec x$, horizontally stretch by 2,
vertically stretch by 2, and reflect across x -axis.

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30. $\frac{5\pi}{6}$

34. $\frac{-3\pi}{4}$

38. $x \approx 3.87$

46.a. $x = 800 \cot y$

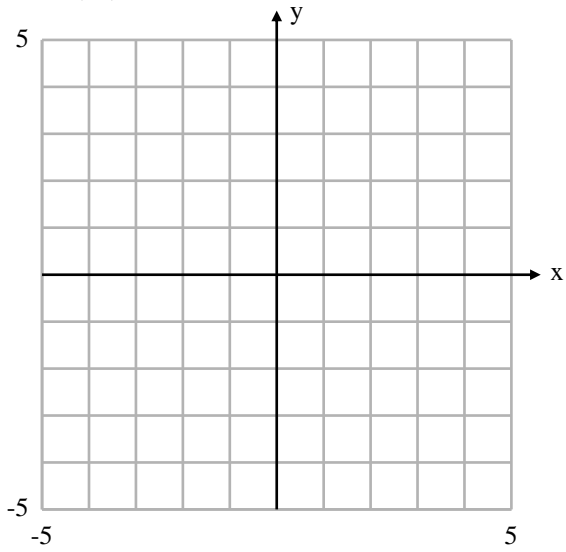
b. ≈ 5051 ft

c. 9°

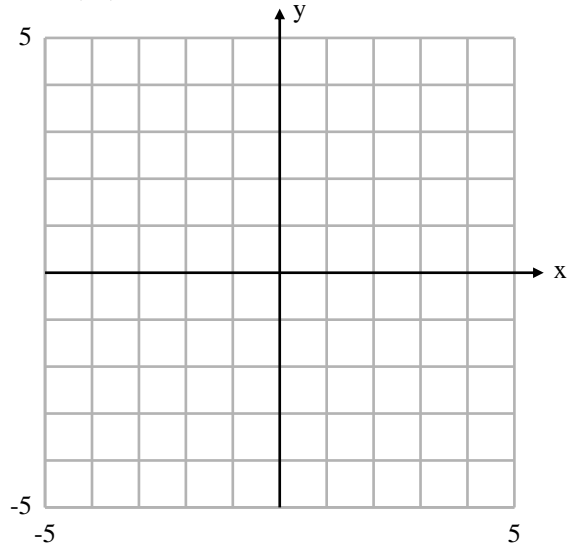
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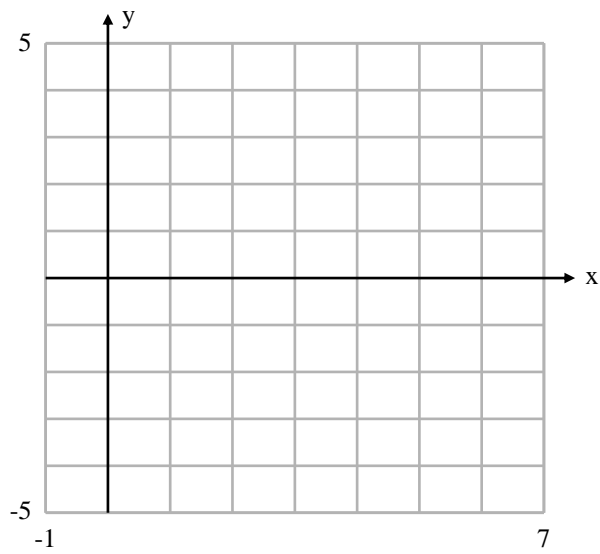
$$f(x) = \sin x$$



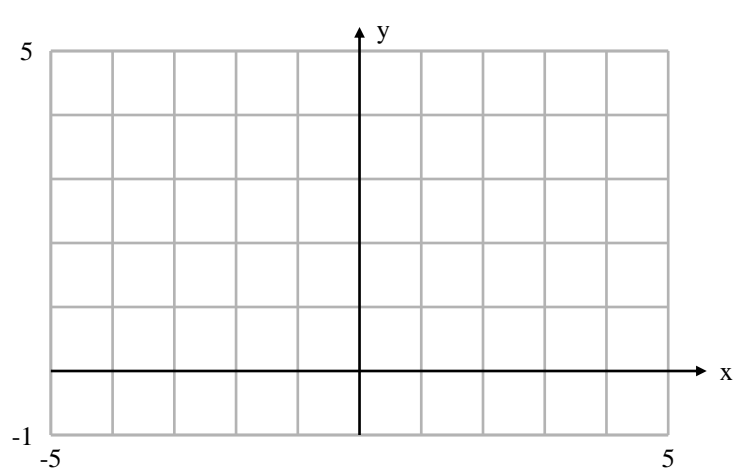
$$f(x) = \sin^{-1} x$$



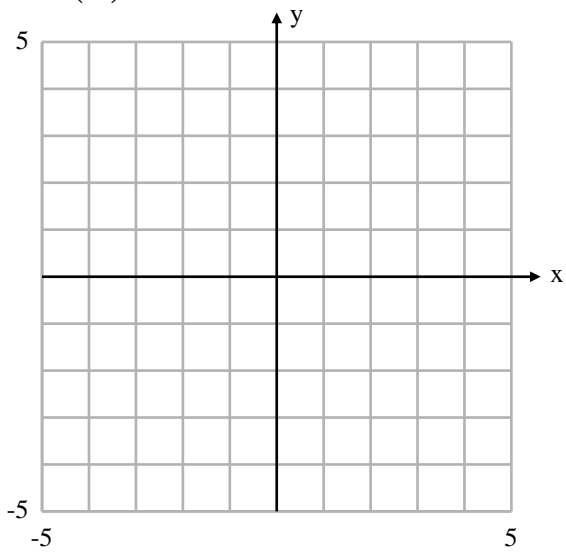
$$f(x) = \cos x$$



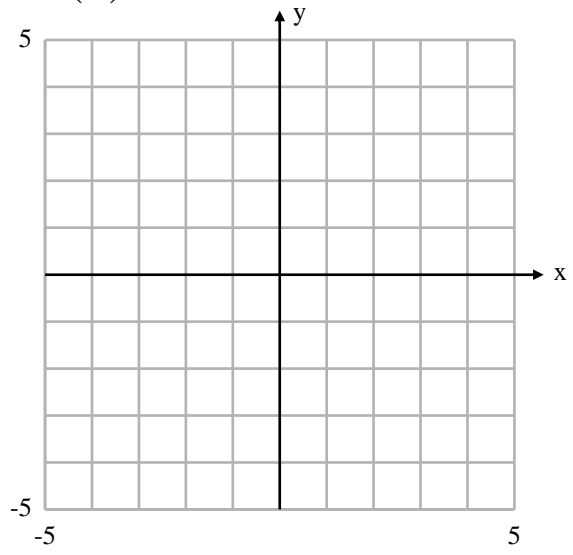
$$f(x) = \cos^{-1} x$$



$$f(x) = \tan x$$



$$f(x) = \tan^{-1} x$$



1. Find the value of each expression without a calculator.

$$\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right)$$

$$\sin^{-1}\left(\frac{\pi}{3}\right)$$

$$\sin^{-1}\left(\sin\left(\frac{7\pi}{6}\right)\right)$$

$$\sin^{-1}\left(\sin\left(\frac{5\pi}{4}\right)\right)$$

$$\sin^{-1}(-0.46)$$

$$\arcsin(0.362)$$

2. Find the value of each expression without a calculator.

$$\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)$$

$$\tan^{-1}\left(\frac{\sqrt{3}}{3}\right)$$

$$\cos^{-1}(\cos(-2.3))$$

$$\cos^{-1}(-0.23)$$

$$\tan^{-1}(4)$$

$$\arctan(-11.8)$$

3. Find the value of each expression without a calculator.

$$\sin(\tan^{-1} 1)$$

$$\cos\left(\sin^{-1} \frac{\sqrt{3}}{2}\right)$$

$$\tan^{-1}(\cos \pi)$$