Section 5.5: Graphs of the Trigonometric Functions

1) The Sine function:

Ex: Graph the following

a) $y = \sin x$, **b)** $y = \sin(x - \dfrac{\pi}{4})$

2) The Cosine function

Ex: Graph the following

a) $y = \cos x$, **b)** $y = 2\cos x$, **c)** $y = \cos 2x$, **d)** $y = \cos \dfrac{x}{2}$,

e) $y = -\cos(x + \dfrac{\pi}{6})$

3) The Tangent function

Ex: Graph the following

a) $y = \tan x$, **b)** $y = -\tan(x + \dfrac{\pi}{3})$

4) The Cotangent function

Ex: Graph the following

a) $y = \cot x$, **b)** $y = -\cot(x - \pi)$

Ex:

1) Select all the equations that are equivalent to $y = \sec x$

a) $y = \csc(x - \dfrac{3\pi}{2})$

b) $y = \sec(x - \pi)$

c) $y = \csc(x + \dfrac{\pi}{2})$

d) $y = \sec(x - \dfrac{\pi}{2})$

e) $y = \sec(x - 2\pi)$

f) $y = \csc(x + \dfrac{3\pi}{2})$

2) Select all the equations that are equivalent to $y = -\cot x$

a) $y = \tan(x - \dfrac{3\pi}{2})$

b) $y = -\tan(x + \dfrac{3\pi}{2})$

c) $y = -\cot(x - \pi)$

d) $y = \tan(x + \dfrac{\pi}{2})$

e) $y = \cot(x - \dfrac{\pi}{2})$

f) $y = \cot(x - 2\pi)$

Ex: Select all the choices that match the given graph.
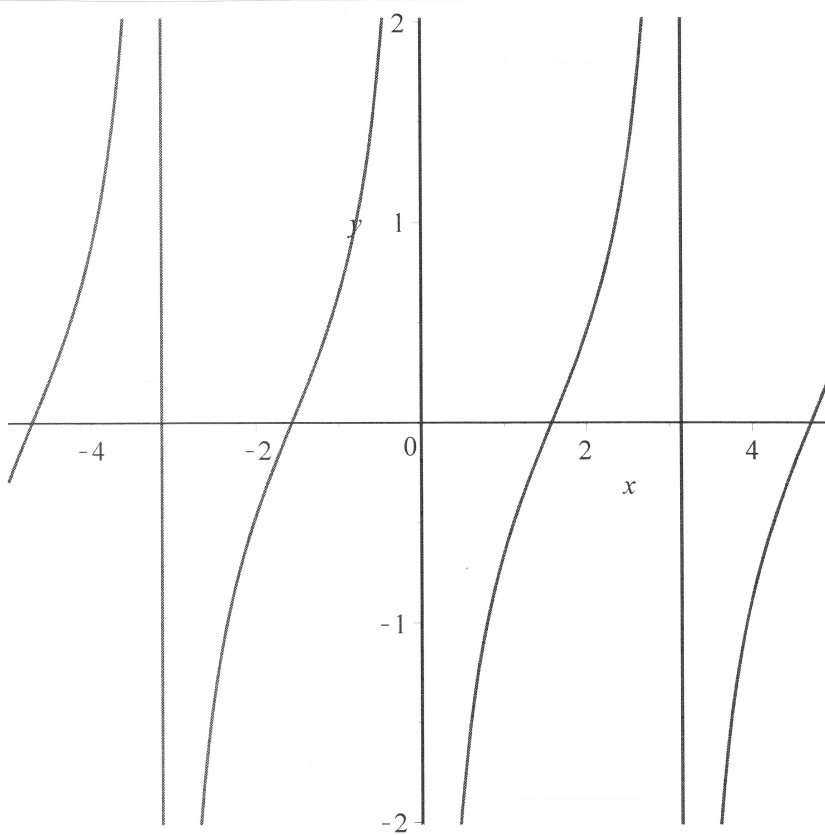
1)

a) $y = \tan(x - \frac{\pi}{2})$

b) $y = -\cot(x - \pi)$

c) $y = -\tan(x + \frac{3\pi}{2})$

d) $y = \tan(x + \frac{\pi}{2})$

2)

a) $y = \sin(x - \frac{3\pi}{2})$

b) $y = \cos(x - 2\pi)$

c) $y = -\sin(x + \frac{\pi}{2})$

d) $y = \cos(x - \pi)$