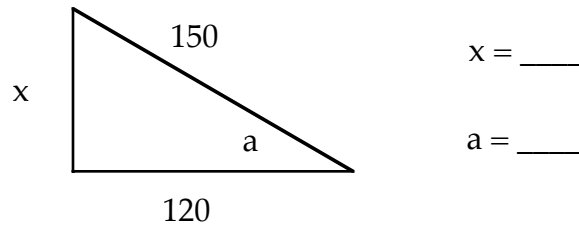
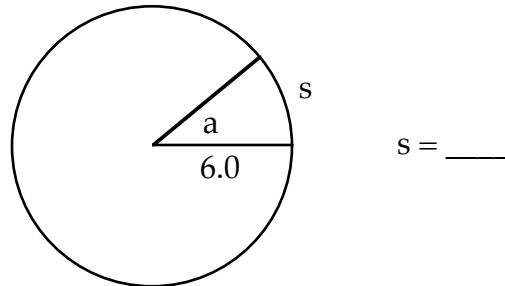


Math 12 Trigonometry Test 100

1) Find the length x , and the angle a (in degrees).



2) Find the arc length s . The angle $a = 0.70$ radians.



3) Convert to radians. (write in terms of π)

- a) -45° b) 270° c) 420°

4) Convert to degrees.

- a) 3π b) $5\pi/4$ c) 2.0

5)a) Find a positive angle co-terminal with -240° . $\underline{\hspace{2cm}}$

b) In which quadrant does -1200° lie? $\underline{\hspace{2cm}}$

6) Solve for x . (Use your calculator. Find one answer)

- a) $\sin(4\pi/3) = x$ b) $\tan(x) = \sqrt{3}$ (answer in degrees)

$x = \underline{\hspace{2cm}}$

$x = \underline{\hspace{2cm}}$

7) Find the **exact** value.

a) $\cos(135^\circ)$

b) $\tan(5\pi/6)$

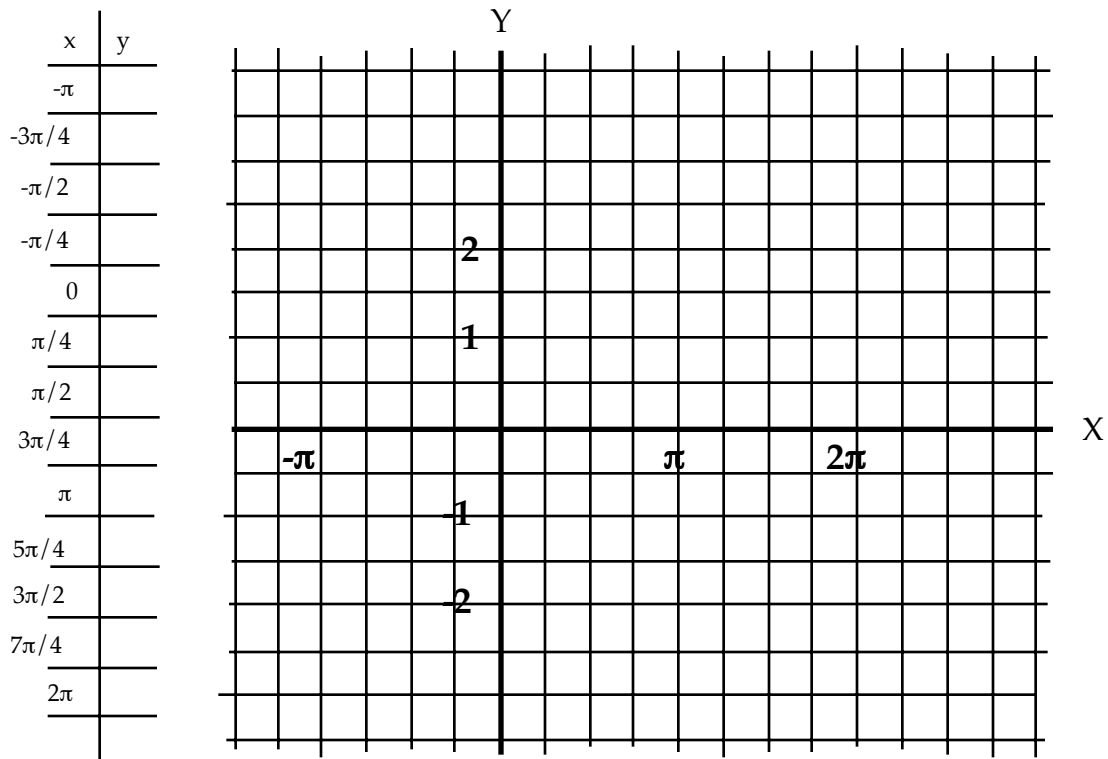
8) Graph the following functions.

a) $y = -2 \sin(x)$

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

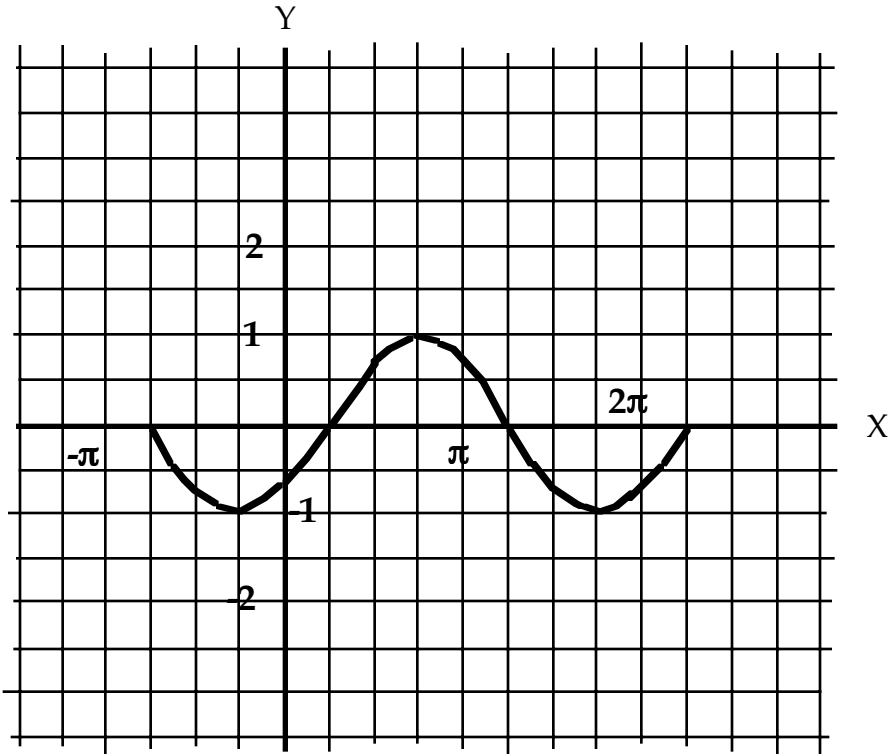
c) $y = 2 \sin(2x)$

d) $y = \cos 2(x + \pi) + 1$

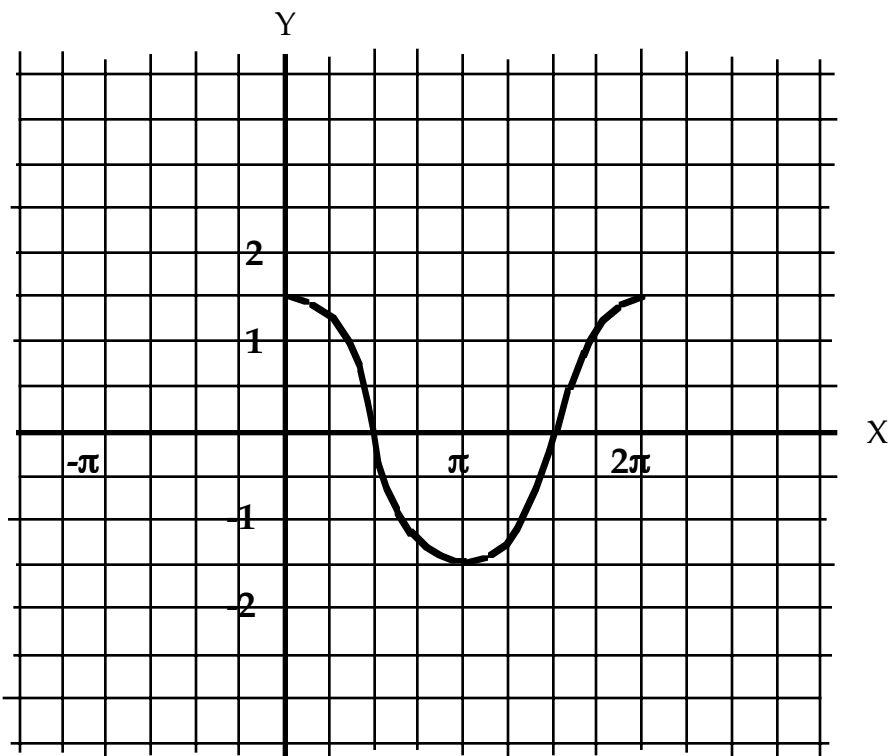


9) Find the equation (in cosine form) of the following graphs.

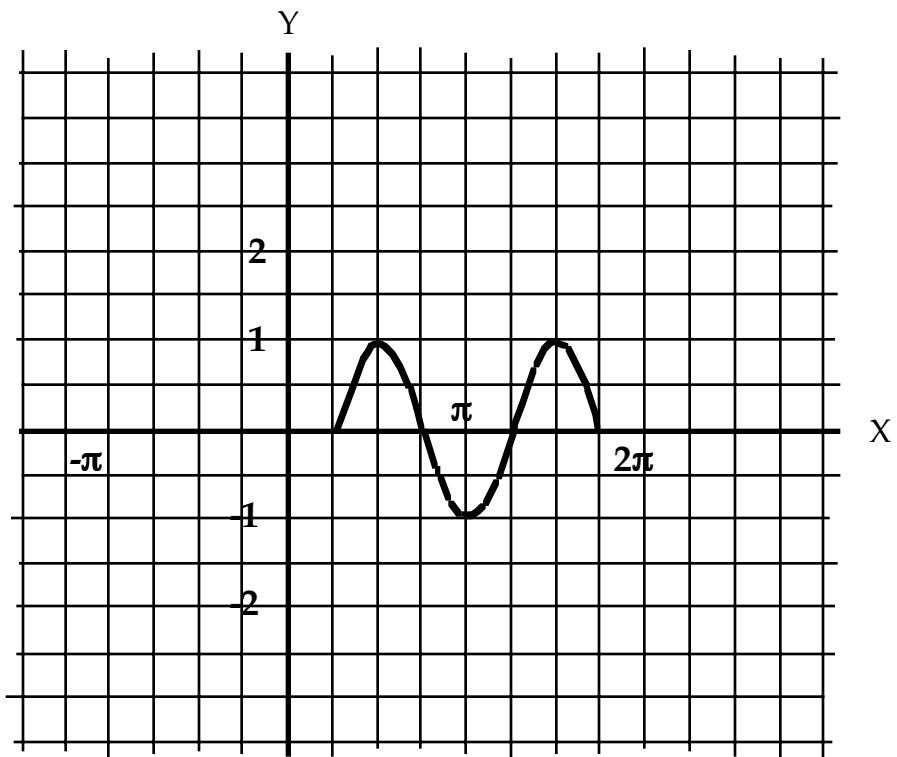
a)



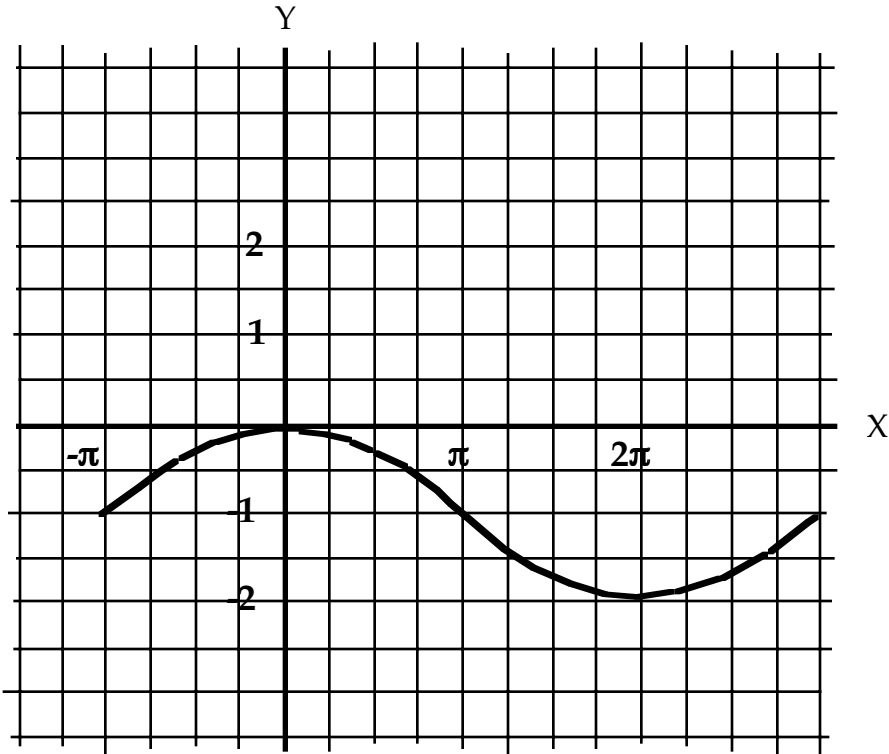
b)



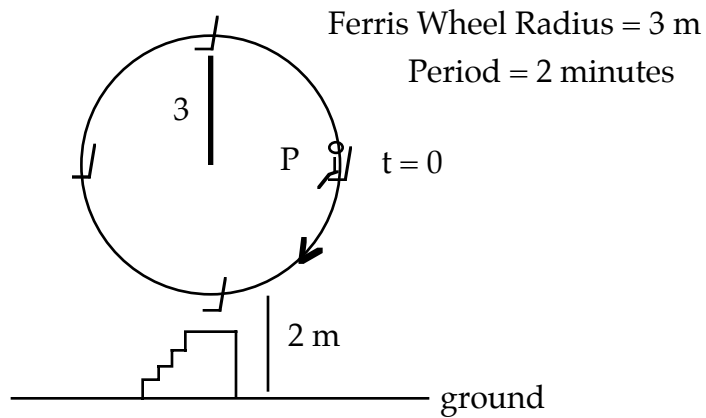
c)



d)

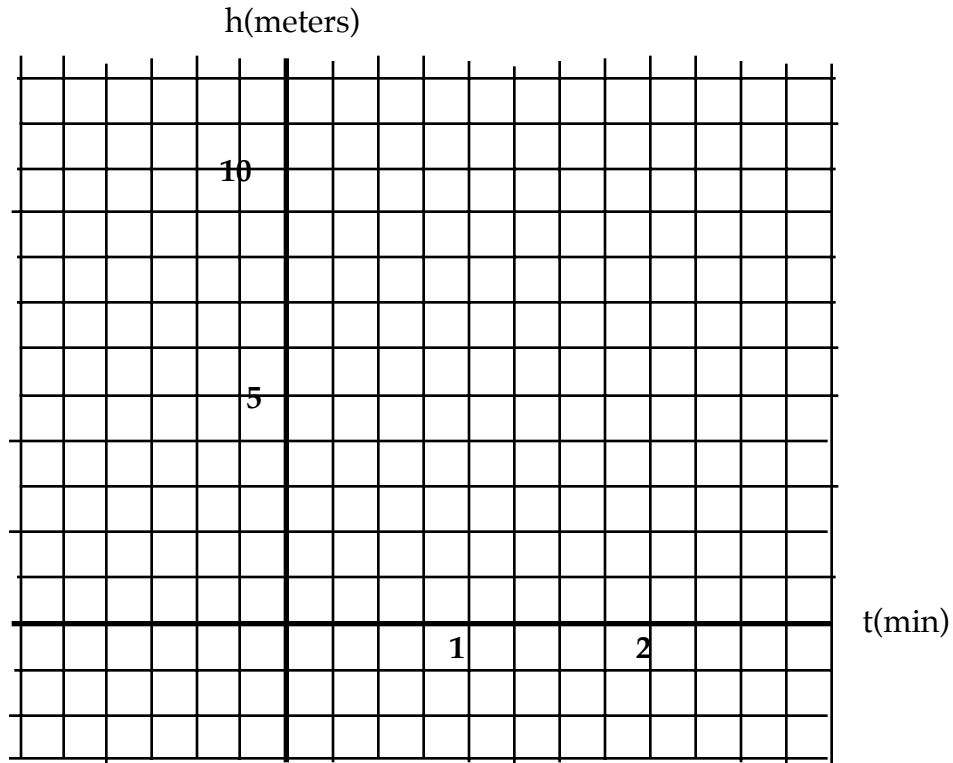


10) Find the equation for the height $h(t)$ of the person P above the ground at time t . Assume that the person is at the position shown at time $t = 0$. The wheel moves **clockwise**.



a) Find the equation for $h(t)$ of the person P.

b) Graph the equation.



11) Give the amplitude (A), phase shift (\emptyset), period (T), and vertical shift (h) for the following equations:

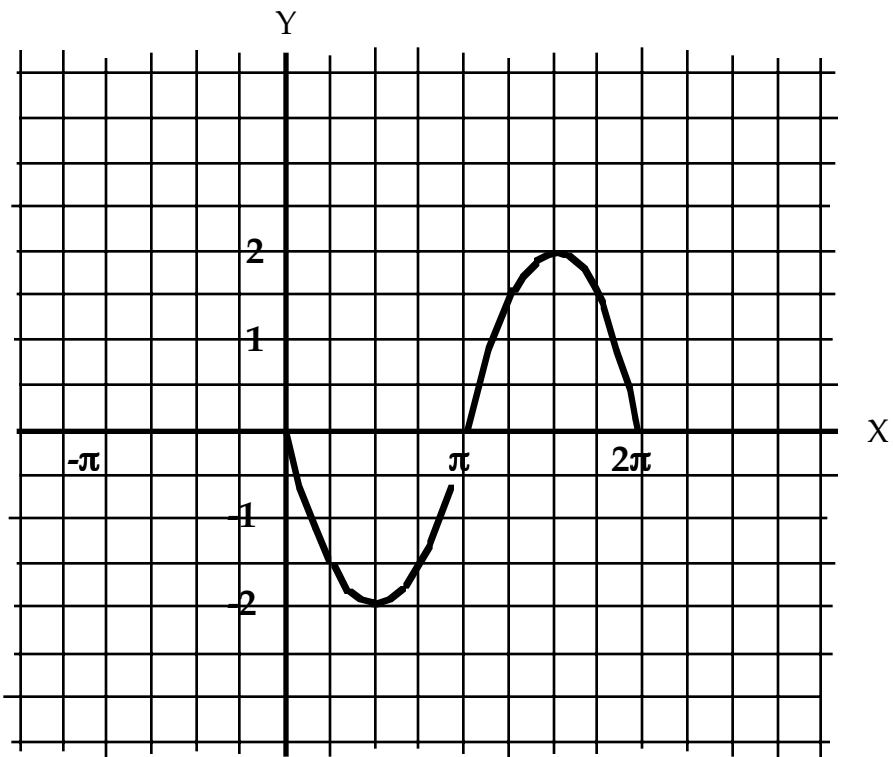
a) $y = -2 \cos(x + (3\pi/2)) + 4$

A = \emptyset = T = h =

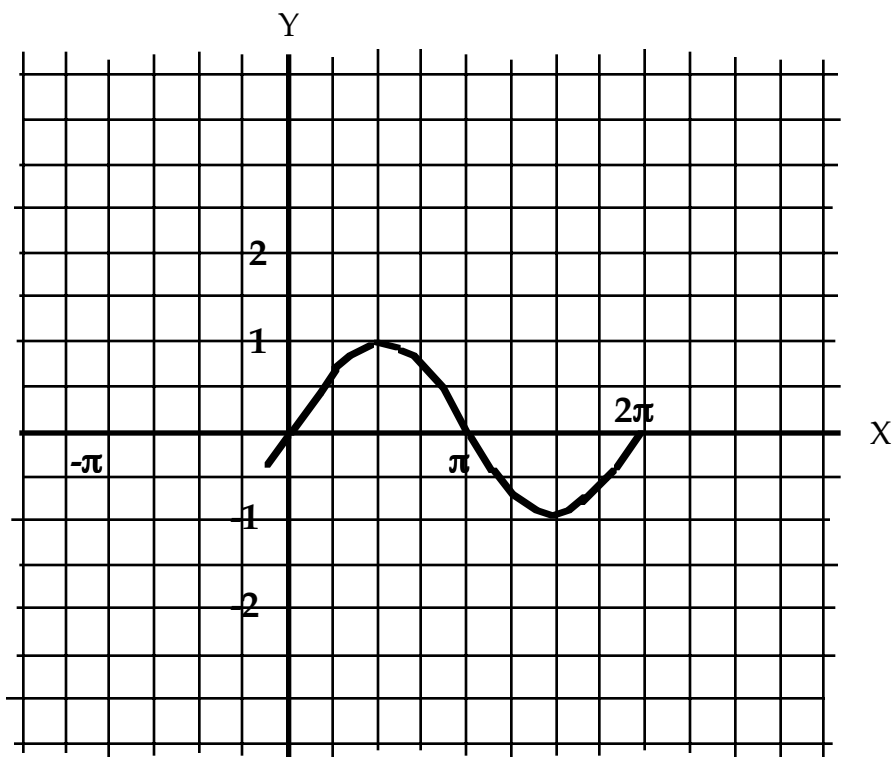
b) $y + 2 = 5 \sin(\pi x)$

A = \emptyset = T = h =

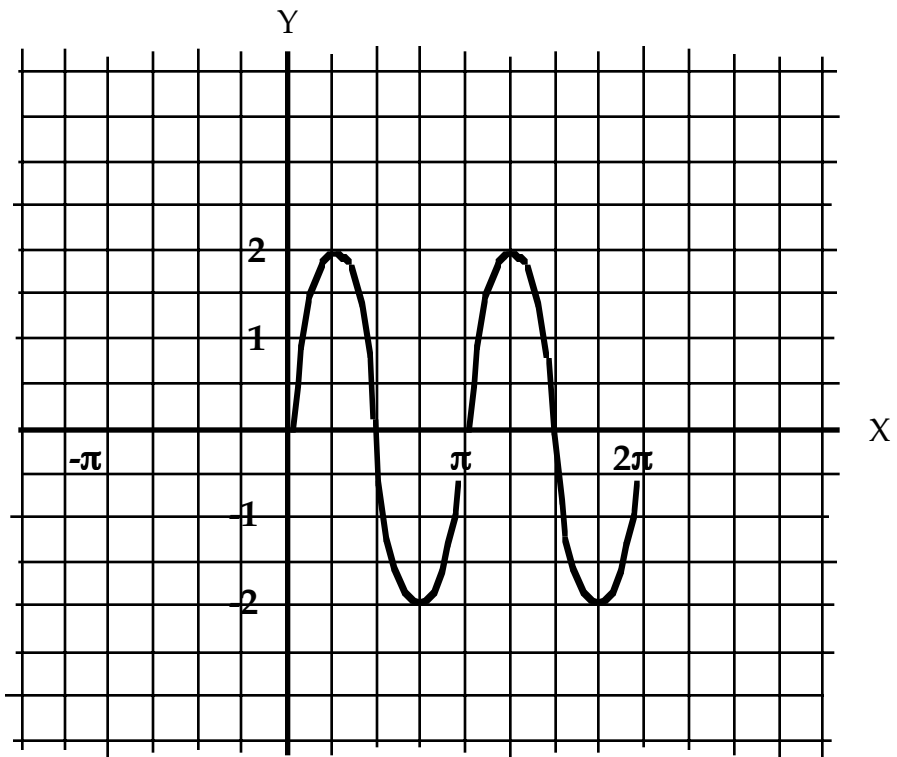
Answers: 1) 90° , 37° , 2) 4.2, 3)a) $7\pi/4$, b) $3\pi/2$, c) $7\pi/6$, 4)a) 540° ,
 b) 225° , c) 114.6° , 5)a) 120, b) 3, 6)a) - 0.866, b) 60° , 7)a) $-\sqrt{2}/2$, b)
 $-\sqrt{3}/3$, 8)a)



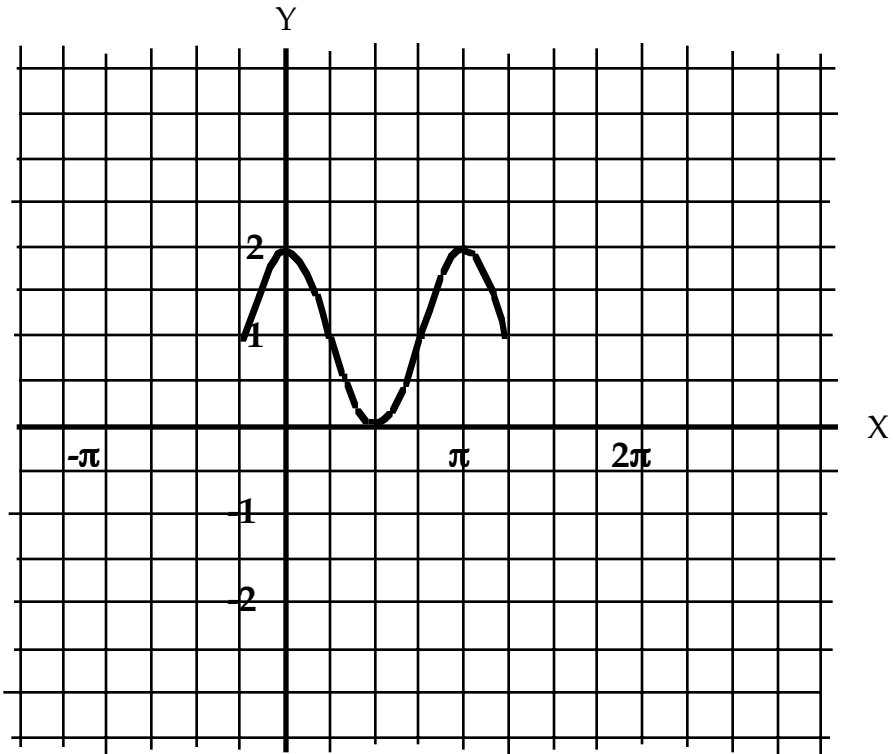
b)



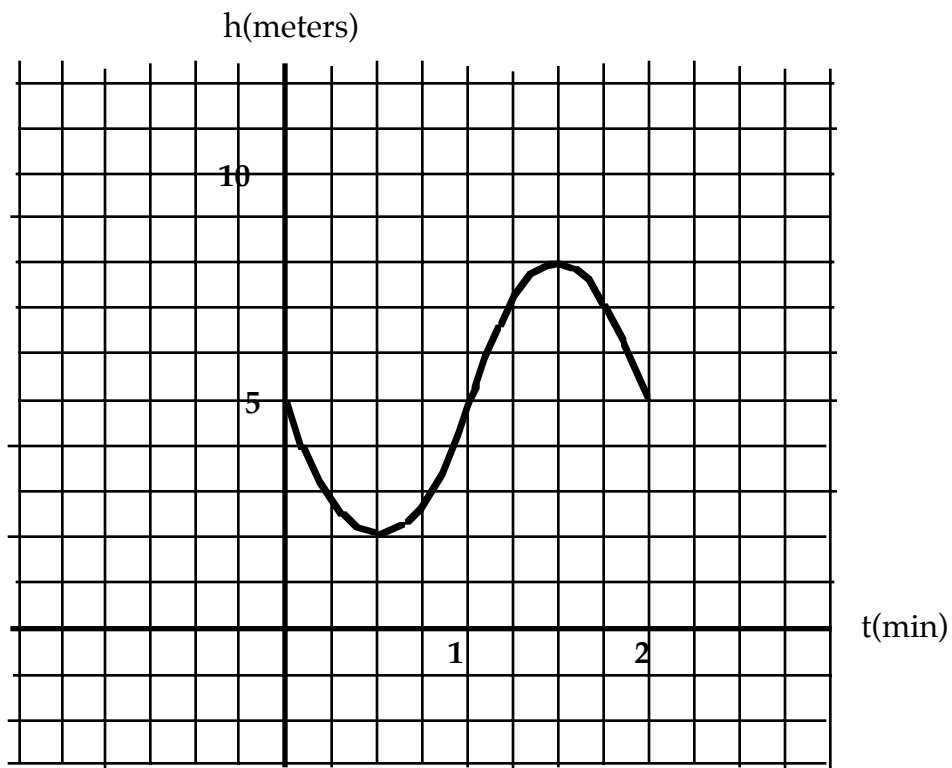
c)



d)



9)a) $y = \cos(x - 3\pi/4)$, b) $y = 1.5 \cos(x)$, c) $y = \cos 2(x - \pi/2)$, d) $y = \cos(x/2) - 1$, 10)a) $h(t) = -3 \sin(\pi t) + 5$, or $3 \sin(\pi(t - 1)) + 5$, or $3 \cos(\pi(t - 1.5)) + 5$, 10)b.



11)a) $2, -3\pi/2, 2\pi, 4$, b) $5, 0, 2, -2$.