

## Warm-up: Oil Well

The jack on an oil well goes up and down, pumping oil out of the ground. As it does so, the distance varies sinusoidally with time. At time = 1 sec, the distance is at its maximum, 3.7 meters. At time = 4 sec, distance is at its minimum, 1.5 m.

- a) Sketch a graph.
- b) Write an equation.
- c) Find the distance when time = 5.5 sec.
- d) Find the first time when distance = 1.78m.