6) at $t_1 = 4s$
$t_2 = 10s$
$\Delta t = 10 - 4 = 6s$
$\Rightarrow 6s = \frac{3}{4} t \Rightarrow t = 8s$
$T = \frac{2\pi r}{v}$
$\Rightarrow r = \frac{2vT}{2\pi} = \frac{(8).8}{2\pi}$
a) $\Rightarrow x = 5 + 3.10$
b) 7m

20) $v_{bg} = v_{bw} + v_{wg}$
c) $4\hat{i} + (-9)\hat{i} = 5\hat{i}$
$v_{bg} + (-9) = 5 km/h$
$\Rightarrow |v| = 5 km/h$
b) $|\vec{v}_{bg}| + x$
c) $\vec{v}_{cg} = \vec{v}_{cb} + \vec{v}_{bg}$
c) $(-6 \div h) = -1 km$
the main gate guide
At $v_{cg} = 2 km/h$

26) $v_{pg} = \frac{900}{2} = 450 km/h$
$\begin{cases} v_{pw} = 500 \sin 20 \hat{i} + \cos 20 \hat{j} \\ h = 171 \end{cases}$
$v_{pg} = v_{pw} + v_{wg}$
$\Rightarrow v = 171 km/h \hat{i} + (-20) km/h \hat{j}$
$\Rightarrow |v| = \sqrt{171^2 + (-20)^2} = 172.16 km/h$
a) $\cos\theta = \frac{-20}{-171}$
$\theta = \cos^{-1} \frac{-20}{-171} = 6,67$