

Distance and Displacement ANSWERS

1. 10km [W] $\xrightarrow{\quad}$ Home $\xrightarrow{\quad}$ 4km [E] $d = 14\text{ km}$

2. 23km [W] $\xrightarrow{\quad}$ 2km [W] $\vec{d} = 21\text{ km [E]}$

3. 800m [W] $\xleftarrow{\quad}$ $\xrightarrow{\quad}$ 500m [E] $\vec{d} = 300\text{m [W]}$
 $d = 1300\text{ m}$

4a) $d = 2\pi(100)$ $b) \vec{d} = 0\text{ m}$
 $= 628\text{ m}$

5. No, the straight line path is always \leq distance

6. Yes.