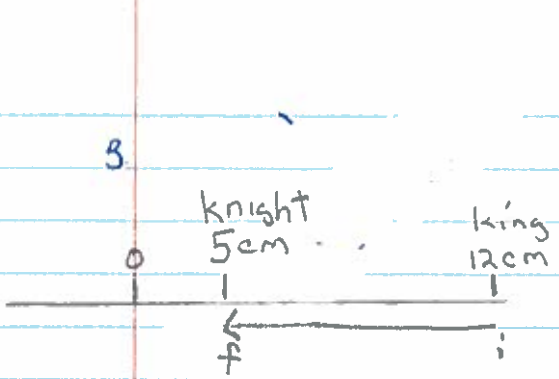


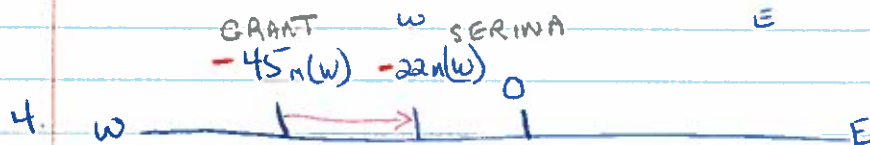
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$d_i = +12$ $d_f = +5$
 → start finish
 Δd - king to knight

$$\begin{aligned}
 &= d_f - d_i \\
 &= +5 - 12 \\
 &= -7 \text{ cm} \\
 &\quad \quad \quad E
 \end{aligned}$$

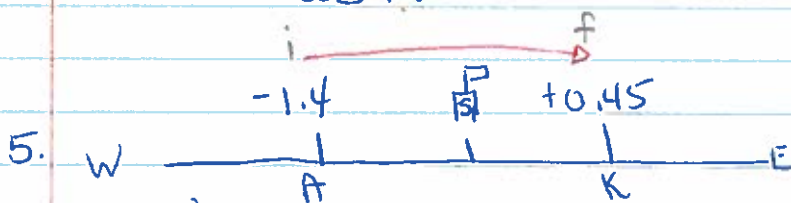
The displacement is -7 cm [W]



$$\begin{aligned}
 G &= d_i = -45 \text{ m} \\
 S &= d_f = -22 \text{ m}
 \end{aligned}$$

$$\begin{aligned}
 \Delta d &= d_f - d_i \\
 &= -22 - (-45) \\
 &= +23 \text{ m}
 \end{aligned}$$

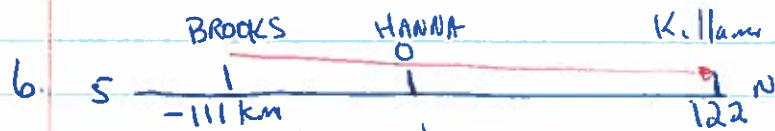
The displacement is 23 m [E]



$$\begin{aligned}
 A &= d_i \\
 K &= d_f
 \end{aligned}$$

$$\begin{aligned}
 \Delta d &= d_f - d_i \\
 &= 0.45 - (-1.4) \\
 &= 0.45 + 1.4 \\
 &= 1.85 \text{ m}
 \end{aligned}$$

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The displacement is 1.85 m [E]



$$\begin{aligned}
 B &= d_i \\
 K &= d_f
 \end{aligned}$$

$$\begin{aligned}
 \Delta d &= d_f - d_i \\
 &= 122 - (-111) \\
 &= 122 + 111 \\
 &= 233 \text{ km}
 \end{aligned}$$

The displacement is 233 km [N]