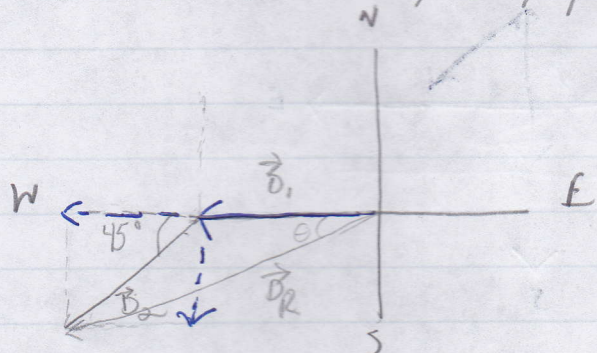


1-6, 8, 9, 14, 15

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Pg 68 Vectors # 1-6, 8, 9, 14, 15



$$\vec{B}_1: \begin{aligned} D_{1x} &= -225 \text{ km} \cos 180^\circ \\ D_{1y} &= 0 \end{aligned}$$

$$\vec{B}_2: \begin{aligned} D_{2x} &= -98 \text{ km} \cos 45^\circ \\ D_{2y} &= -98 \text{ km} \sin 45^\circ \end{aligned}$$

$$\begin{aligned} D_{Rx} &= -225 \text{ km} \cos 180^\circ - 98 \text{ km} \cos 45^\circ \approx 156 \text{ km} \\ D_{Ry} &= 0 - 98 \text{ km} \sin 45^\circ = -69 \text{ km} \end{aligned}$$

$$D_R = \sqrt{(156)^2 + (-69)^2} \approx 170 \quad \text{magnitude}$$

$$-\tan^{-1}\left(\frac{-69}{156}\right) \approx -23.86^\circ \quad \text{Direction}$$