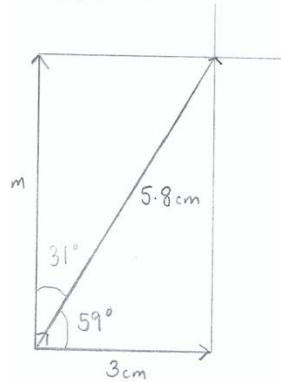


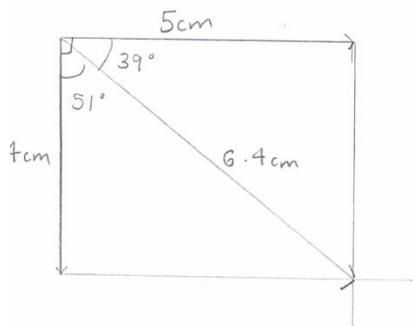
Resultant Vectors Scale Drawing Mark Scheme

15m East 1cm = 5m
 25 m North



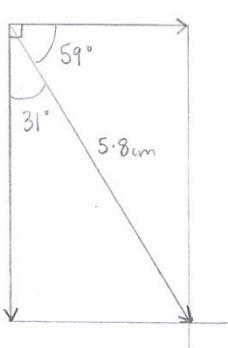
Resultant:
 5.8 cm
 $= \underline{\underline{29 \text{ m}}}$
 at 31° East of North
 /from North
 or 59° North of East
 /from East

100 N right
 80 N down 1cm = 20 N



Resultant:
 6.4 cm
 $= \underline{\underline{128 \text{ N}}}$
 at 39° below horizontal
 or 51° from vertical

100 km South
 60 km East 1cm = 20 km



Resultant:
 5.8 cm
 $= \underline{\underline{116 \text{ km}}}$
 at 31° East of South
 /from South
 or 59° South of East
 /from East



4. Vertical:

12 N up - 3 N down

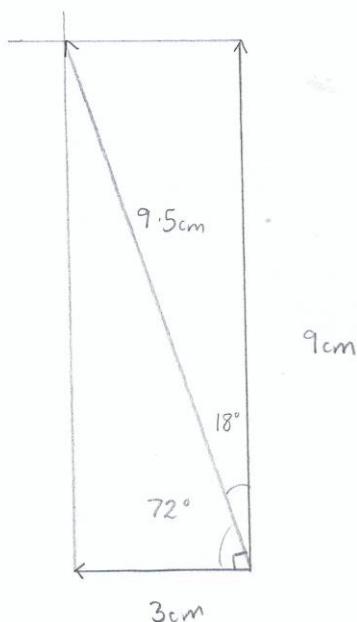
$$= \boxed{9 \text{ N up}}$$

Horizontal:

9 N left - 6 N right

$$= \boxed{3 \text{ N left}}$$

$$\begin{matrix} 9 \text{ N up} \\ 3 \text{ N left} \end{matrix} \quad 1 \text{ cm} = 1 \text{ N}$$



Resultant:

$$9.5 \text{ cm}$$

$$= 9.5 \text{ N}$$

at 18° from vertical

or 72° from horizontal

5. North/South:

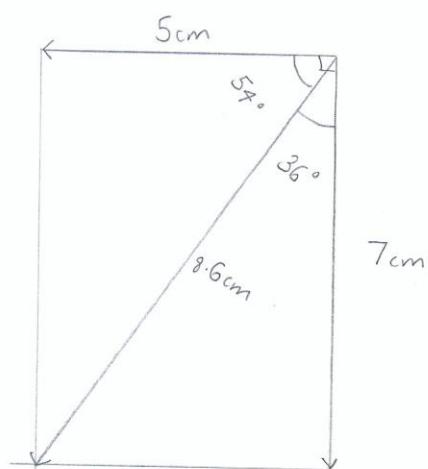
100 m South - 30 m North

$$= 70 \text{ m South}$$

East/West

$$50 \text{ m West}$$

$$\begin{matrix} 70 \text{ m South} \\ 50 \text{ m West} \end{matrix} \quad 1 \text{ cm} = 10 \text{ m}$$



Resultant:

$$8.6 \text{ cm}$$

$$= 86 \text{ m}$$

at 36° West of South
/from South

or 54° South of West
/from West

