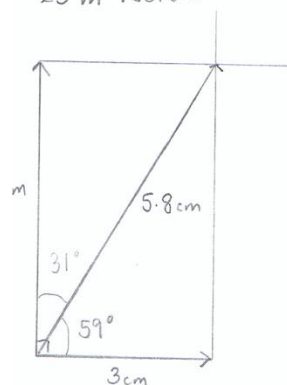




## Resultant Vectors Scale Drawing Mark Scheme

15 m East  
25 m North

1 cm = 5 m



Resultant:

5.8 cm

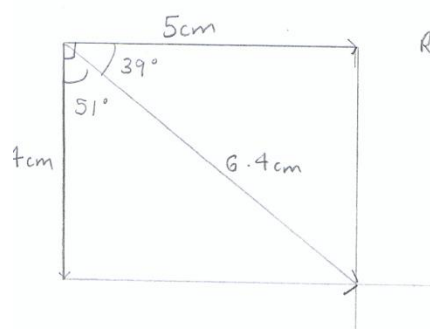
= 29 m

at 31° East of North  
/from North

or 59° North of East  
/from East

100 N right  
80 N down

1 cm = 20 N



Resultant:

6.4 cm

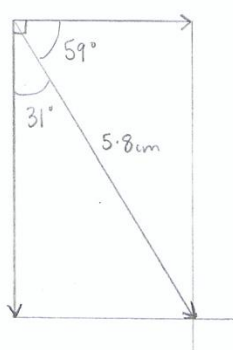
= 128 N

at 39° below horizontal

or 51° from vertical

100 km South  
60 km East

1 cm = 20 km



Resultant:

5.8 cm

= 116 km

at 31° East of South  
/from South

or 59° South of East  
/from East





4. Vertical:

$$12 \text{ N up} - 3 \text{ N down}$$

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

Horizontal:

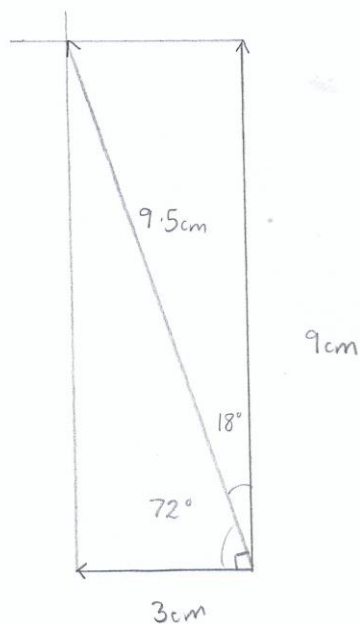
$$9 \text{ N left} - 6 \text{ N right}$$

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

$$9 \text{ N up}$$

$$3 \text{ N left}$$

$$1 \text{ cm} = 1 \text{ N}$$



Resultant:

$$9.5 \text{ cm}$$

$$= 9.5 \text{ N}$$

at  $18^\circ$  from vertical

or  $72^\circ$  from horizontal

5. North/South:

$$100 \text{ m South} - 30 \text{ m North}$$

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

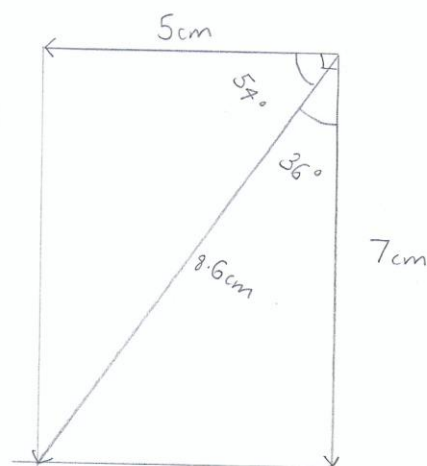
East/West

$$50 \text{ m West}$$

$$70 \text{ m South}$$

$$50 \text{ m West}$$

$$1 \text{ cm} = 10 \text{ m}$$



Resultant:

$$8.6 \text{ cm}$$

$$= 86 \text{ m}$$

at  $36^\circ$  West of South  
/from South

or  $54^\circ$  South of West  
/from West

