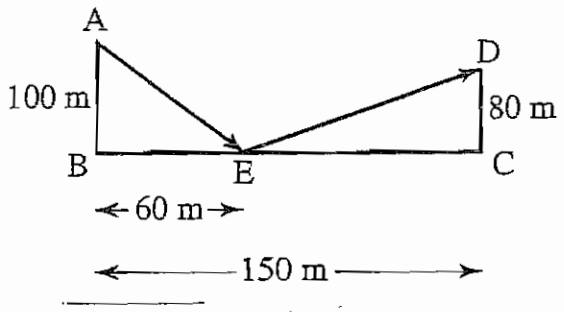
YEAR 9 : PYTHAGORAS ASSESSMENT TASK

SURF LIFESAVING CONTESTS

A surf lifesaving contest involves swimming from marker A to the shoreline BC, then on to marker D as shown in the diagram below.



Suppose a lifesaver swims the course A-E-D where E is 60m from B.

1. What total distance will the lifesaver swim?
2. Suppose point E was 100 m from B. Determine how far the lifesaver would swim in total.
3. Suppose point E is halfway between B and C. How far would the lifesaver swim in total?
4. Complete the table below:

Length BE (m)	Length AE (m)	Length ED (m)	Total length (AE + ED) (m)
50			
60			
70			
80			
90			
100			
110			

5. Use the data in the table to plot the graph of length BE (horizontal axis) versus total length (AE + ED) (vertical axis).
6. What is the shortest distance the lifesaver could swim from marker A to the shoreline then to marker D?
7. Draw a scale diagram showing the path taken by the lifesaver to swim this shortest distance.
   Measure the angles AEB and DEC. What do you notice?