

Other compound measures

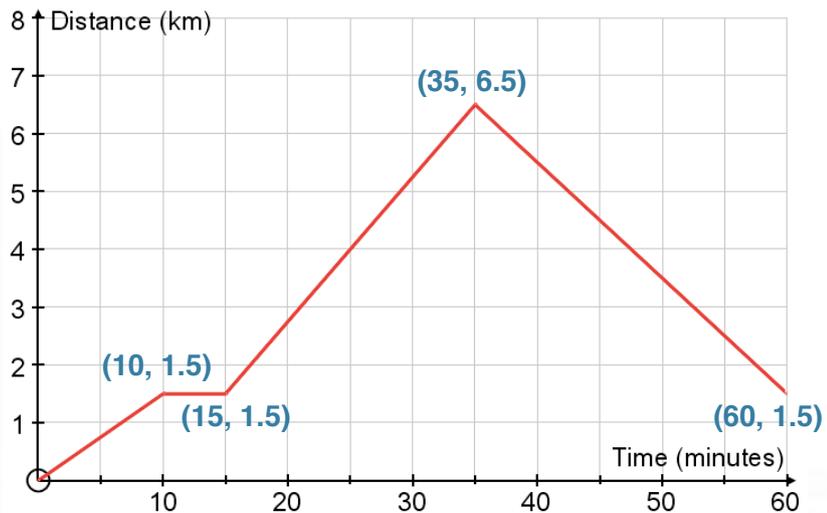
**Starter**

1. **(Review of last lesson)** Julie jogs 1.5 km in 10 minutes to Ananya's house as they are going for a run together. She has to wait 5 minutes for Ananya to get ready. They run at 15 km/h for 5 km in the same direction as Julie was walking. Finally, they turn around and return to Ananya's house in 25 minutes.
- (a) Draw a distance-time graph for Julie's journey.  
 (b) How far does Julie travel?

**Working:**

- (a) "...run at 15 km/h for 5 km"

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{5}{15} = \frac{1}{3} \text{h} \equiv \frac{1}{3} \times 60 = 20 \text{ minutes}$$



- (b) Julie travels  $6.5 + 5 = 11.5$  km

**E.g. 1** Marcus can type 115 words in 5 minute.

- (a) Calculate his typing rate in words per minute.  
 (b) Marcus needs to type up his English essay of 800 words. How long would it take him if his typing rate remains constant? Give your answer in minutes and seconds, to the nearest second.

**Working:**

(a) Words per minute =  $\frac{115}{5} = 23$  words per minute.

(b) Time to type 800 words =  $\frac{800}{23} \approx 34.78$  m  
 $34.78... \text{ m} = 34\text{m } (0.78... \times 60)\text{s} = 34\text{m } 47\text{s}$   
 Marcus would take 34m 47s to type the English essay

**E.g. 2** Sarah wants to buy compost for her allotment. Compost4U sell compost at £26.10 for a 3 kg bag and CompostRUS sell 5 kg bags for £44. By calculating the price per kg, decide which is the best buy and by how much

**Working:** Compost4U:  $£26.10 \div 3 = £8.70$  per kg  
CompostRUS:  $£44 \div 5 = £8.80$  per kg  
So Compost4U is 10p/kg cheaper.

**Video:** [Compound measures](#)

[Solutions to Starter and E.g.s](#)

**Exercise**

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