



S1

CfE Level 3

Working at Home Workbook

Time

Learning Intention. To be able to -

Solve time, distance & speed problems using whole units of time

Solve TDS problems involving half hour/ quarter hour times

















Change hours and minutes into decimal times

Change decimal times into hours and minutes

Interpret and do calculations using a TDS graph





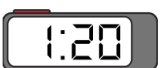
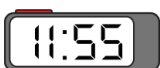



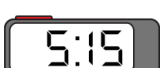

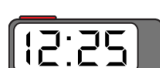
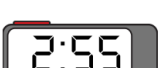
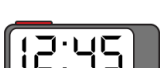

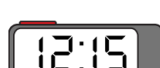
Analog and Digital Clocks

Match the analog clock on the top to the digital clock on the bottom.

1) 	2) 	3) 	4) 
5) 	6) 	7) 	8) 
9) 	10) 	11) 	12) 
13) 	14) 	15) 	16) 

Answers

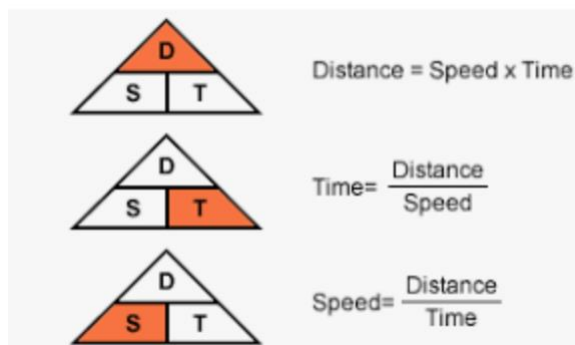
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

A) 	B) 	C) 	D) 
E) 	F) 	G) 	H) 
I) 	J) 	K) 	L) 
M) 	N) 	O) 	P) 

13. _____
14. _____
15. _____
16. _____

Solve time, distance & speed problems using whole units of time

Reminder on how to solve speed/distance/time problems.



Complete the following table of Speed/Distance/Time problems

	Speed	Distance	Time
1	50 km/h		3 hours
2	85 mph	520 miles	
3		306 km	17 hours
4	25 km/h	375 km	
5	52 mph		5 hours
6		76 miles	4 hours
7	65 km/h	520 km	
8	18 m/s	90 m	
9	7 cm/min		25 mins
10		12 cm	11 sec

11. Mrs Frank drives at an average speed of 45 km/h for 2 hours. How far has she travelled?
12. Jack decides to cycle the distance of 66 miles from Dundee to Aberdeen. He thinks it should take him 3 hours. What will be his average speed?
13. A Cheetah can run at 74 mph. How far would it run if it continued at this speed for 4 hours?

Solve TDS problems involving half hour/ quarter hour times

Complete the following table of Speed/Distance/Time problems

	Speed	Distance	Time
1	44 mph	154 miles	
2	124 km/h		2.5 hours
3		18 km	$\frac{1}{2}$ hour
4	56 km/h		3.25 hours
5	14 m/s	31.5 m	
6	114 mph	285 miles	
7		45 m	7.5 mins
8	12 mph	63 miles	
9	57 km/h	313.5 km	
10	99 mph		$\frac{1}{4}$ hour

11. A plane flew for 875 miles at a speed of 250 mph. For how long was it in the air ?
12. A train travelled 7.5 km in 15 minutes. What speed (km/hr) was it travelling at ?
13. A space rocket averaged 3600 km/hr for 2 hours 15 minutes. What distance did it travel ?

Change hours and minutes into decimal times

Example: Change 3 hours 24 mins into decimal hours

$$3 + \frac{24}{60} = 3.4$$

Exercise

Change the following into decimal hours

1) 5 mins	2) 10 mins	3) 45 mins
4) 3 hours 12 mins	5) 8 hours 5 mins	6) 2 hours 18 mins
7) 5 hours 36 mins	8) 18 hours 24 mins	9) 6 hours 42 mins
10) 10 hours 10 mins	11) 3 hours 40 mins	12) 7 hours 59 mins

Change the time to decimal hours before calculating the following:

	Speed	Distance	Time
1	34 mph		3 hours 24 mins
2		18 miles	5 hours 16 mins
3		45 km	2 hours 36 mins
4	65 km/h		1 hour 55 mins
5	15.5 km/h		48 mins

Change decimal times into hours and minutes

Example: Change 3.2 hours into hours and minutes

3 hours (0.2 x 60) = 3 hours 12 minutes

Change the following into hours and minutes

1) 0.3 hrs	2) 0.7 hrs	3) 0.4 hrs
4) 1.6 hrs	5) 2.65 hrs	6) 7.1 hrs
7) 5.05 hrs	8) 8.15 hrs	9) 10.2 hrs
10) 1.75 hrs	11) 2.9 hrs	12) 9.35 hrs

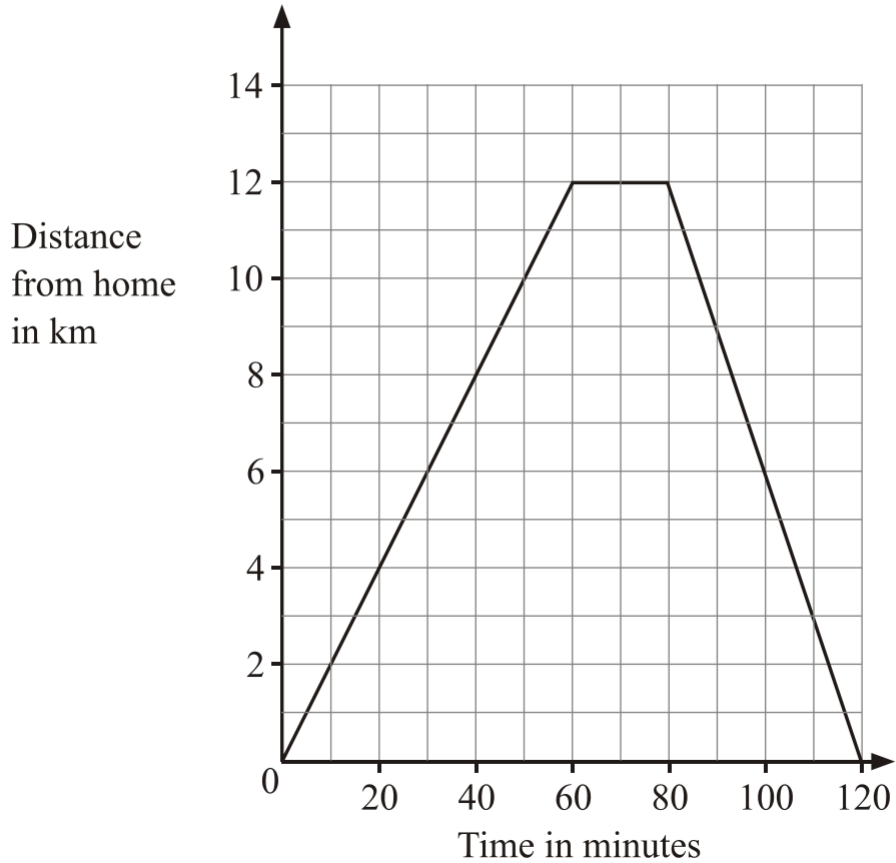
Change the answer to the following into hours and minutes:

	Speed	Distance	Time
1	23 km/h	82.8 km	
2	54 mph	280.8 miles	
3	124 km/h	502.2 km	
4	86 mph	60.2 miles	
5	155 km/h	565.75 km	

Interpret and do calculations using a TDS graph

Margaret went on a cycle ride.

The travel graph shows Margaret's distance from home on this cycle ride.



- How far had Margaret cycled after 30 minutes?
- How long into the journey did Margaret stop for a rest?
- How long did Margaret rest for?
- What was her outward speed?
- What speed did Margaret do cycling home?