

TIME-SET-2

1

A bus company in Dubai has the following operating times.

Day	Starting time	Finishing time
Saturday	06 00	24 00
Sunday	06 00	24 00
Monday	06 00	24 00
Tuesday	06 00	24 00
Wednesday	06 00	24 00
Thursday	06 00	24 00
Friday	13 00	24 00

(a) Calculate the total number of hours that the bus company operates in one week.

Answer(a) h [3]

(b) Write the starting time on Friday in the 12-hour clock.

Answer(b) [1]

MS-1	(a)	119	3	M2 for $18 \times 6 + 11$ oe or B1 for 18 or 11 or 108
	(b)	[0] 1 [00] pm cao	1	
2	<p>A car travels a distance of 1280 metres at an average speed of 64 kilometres per hour.</p> <p>Calculate the time it takes for the car to travel this distance. Give your answer in seconds.</p> <p style="text-align: right;"><i>Answer</i> s [3]</p>			
MS-2		72	3	<p>M2 for $\frac{1280}{64} \times \frac{60 \times 60}{1000}$</p> <p>M1 for working out distance \div speed e.g. figs $1280 \div 64$ or figs $\frac{1280}{\text{their speed}}$</p> <p>or for working out km/h to m/s conversion e.g. $64 \times \frac{1000}{60 \times 60}$ oe</p> <p>or their $\left(\frac{1280}{64}\right) \times \frac{60 \times 60}{1000}$ oe</p>
3	<p>A train leaves Zurich at 22 40 and arrives in Vienna at 07 32 the next day.</p> <p>Work out the time taken.</p> <p style="text-align: right;">..... h min [1]</p>			

MS-3	8(h) 52 (min)	1	
4	<p>A car of length 4.3 m is travelling at 105 km/h. It passes over a bridge of length 36 m.</p> <p>Calculate the time, in seconds, it takes to pass over the bridge completely.</p> <p style="text-align: right;">..... s [3]</p>		
MS-4	1.38 or 1.381 to 1.382	3	<p>M2 for $(36 + 4.3) \div (105 \times \frac{1000}{60 \times 60})$ oe</p> <p>or M1 for $105 \times \frac{1000}{60 \times 60}$ or for a distance \div a speed</p> <p>or SC2 for answer 1.23(4...)</p>
5	<p>Anna walks 31 km at a speed of 5 km/h. Both values are correct to the nearest whole number.</p> <p>Work out the upper bound of the time taken for Anna's walk.</p> <p style="text-align: right;">..... hours [2]</p>		

MS-5	80	2	M1 for $\left(\frac{12}{3}\right)^2$ or $\left(\frac{3}{12}\right)^2$ oe or $\frac{3^2}{5} = \frac{12^2}{A}$ oe
6	<p>The distance between Prague and Vienna is 254 kilometres. The local time in Prague is the same as the local time in Vienna. A train leaves Prague at 15 20 and arrives in Vienna at 19 50 the same day.</p> <p>Calculate the average speed of the train.</p> <p>..... km/h [2]</p>		
MS-6	56.4 or 56.44...	2	M1 for $\frac{254}{their\ 4.5}$ or $\frac{254}{their\ 270} [\times 60]$
7	<p>Giulio's reaction times are measured in two games. In the first game his reaction time is $\frac{1}{3}$ of a second. In the second game his reaction time is $\frac{1}{8}$ of a second.</p> <p>Find the difference between the two reaction times.</p> <p>..... s [1]</p>		
MS-7	$\frac{5}{24}$ or 0.208 or 0.2083...	1	

8

The Canadian Maple Leaf train timetable from Toronto to Buffalo is shown below.

Toronto	1030
Oakville	1052
Aldershot	1107
Grimsby	1141
St Catharines	1159
Niagra Falls	1224
Buffalo	1325

(a) How long does the journey take from Toronto to Buffalo?

Answer(a) h min [1]

(b) This journey is 154 kilometres. Calculate the average speed of the train.

Answer(b) km/h [2]

MS-8

(a) 2h 55m
(b) 52.8

1
2*

M1 $154 \div$ (a) in hours or **M1** $154 \times 60 /$ their "175"

9	<p>A light on a computer comes on for 26 700 microseconds.</p> <p>One microsecond is 10^{-6} seconds.</p> <p>Work out the length of time, in seconds, that the light is on</p> <p>(a) in standard form,</p> <p style="text-align: right;"><i>Answer(a)</i> s [1]</p> <p>(b) as a decimal.</p> <p style="text-align: right;"><i>Answer(b)</i> s [1]</p>		
MS-9	<p>(a) 2.67×10^{-2}</p> <p>(b) 0.0267(00...)</p>	<p>1</p> <p>1ft</p>	<p>cao – must be correct notation</p> <p>correct or ft</p>
10	<p>A plane took 1 hour and 10 minutes to fly from Riyadh to Jeddah.</p> <p>The plane arrived in Jeddah at 23 05.</p> <p>At what time did the plane depart from Riyadh?</p> <p style="text-align: right;"><i>Answer</i> [1]</p>		
MS-10	21 55	1	Allow 9.55 pm

11	<p>Maria decides to increase her homework time of 8 hours per week by 15%.</p> <p>Calculate her new homework time. Give your answer in hours and minutes.</p> <p style="text-align: right;"><i>Answer</i> h min [3]</p>		
MS-11	9 h 12 min	3	M1 for 8×1.15 A1 for 9.2 B1 ft independent for their 9.2 correctly converted into hours and minutes