

Learning Outcome 1

Convert these written times into 12 hour clock time:



Learning Outcome 2

Word bank:

one	two	three	four	five	six	seven	eight	nine	ten
			eleven	twelve					
		twenty	thirty	forty	fifty				
hour		o'clock	half	quarter	past	to			

Convert these 12 hour clock times into written times:

12 hr clock time

Written time

Learning Outcome 3

Remember 60 seconds = 1 minute


Convert seconds into minutes and seconds:

seconds


**minutes and
seconds**


seconds


**minutes and
seconds**


	2 mins 0s
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	1 min 49s
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Learning Outcome 4

Remember 1 minute = 60 seconds

Convert minutes and seconds into seconds only:

**minutes and
seconds**

seconds



4 mins

**minutes and
seconds**

seconds



3 mins 15
seconds



1 min 30
seconds



5 mins 35
seconds

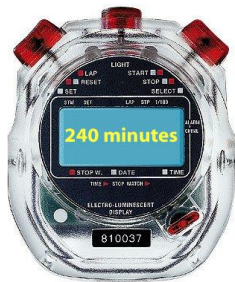
Learning Outcome 5

Remember $60 \text{ minutes} = 1 \text{ hour}$

Convert minutes into hours and minutes:

minutes

**hours and
minutes**



240 mins

4 hours 0
mins

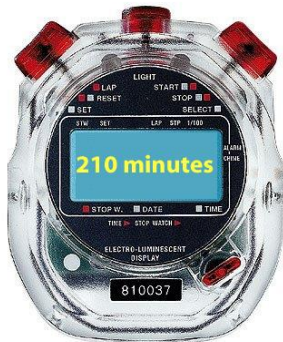
minutes

**hours and
minutes**

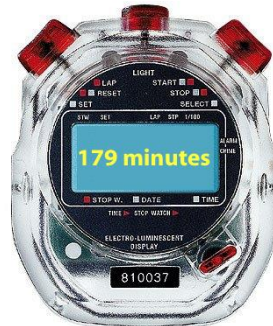


119 mins

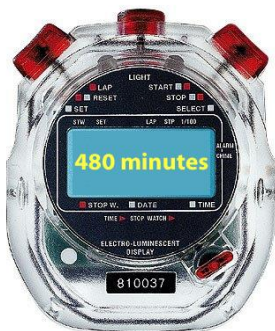
1 hour 59
mins



210 mins



179 mins



480 mins



269 mins

Learning Outcome 6

Remember 1 hour = 60 minutes

Convert hours and minutes into minutes only:

**hours and
minutes**

minutes



2 hours 30 mins

**hours and
minutes**

minutes



1 hour 43 mins



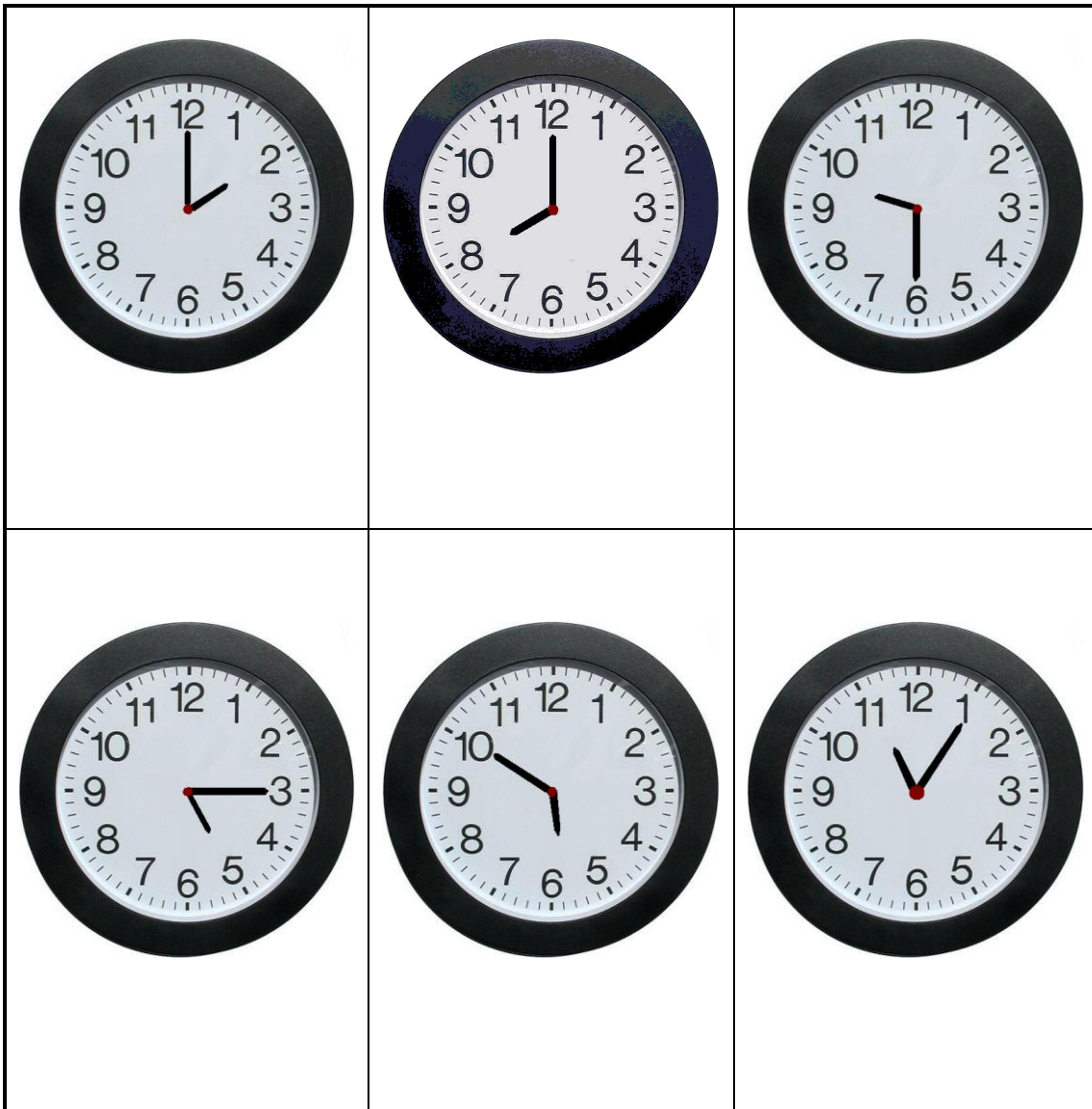
4 hours 30 mins



2 hours 34 mins

Learning Outcome 7

Write the 12 hour times of these analogue clocks:




Learning Outcome 8


Convert these 24-hour times into 12-hour times.


Remember to use **am** or **pm** for the 12-hour times.

24-hour 12-hour



 09.00	9.00 am
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24-hour 12-hour

 15.30	3.30 pm
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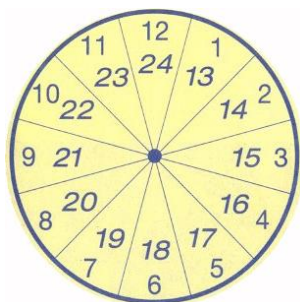
 17.00	
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 13.15	
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 23.45	
 14.25	

 07.10	
 10.05	

Learning Outcome 9



Use this clock to help you convert to 24 hour times.

Convert these 12-hour times into 24-hour times.

12-hour 24-hour

 <p>4.00 pm</p>	16.00
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 <p>9.00 am</p>	
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 <p>7.45 pm</p>	
 <p>1.25 pm</p>	

12-hour 24-hour











 <p>3.30 am</p>	03.30
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 <p>6.00 pm</p>	
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 <p>8.10 am</p>	
 <p>2.05 am</p>	

Learning Outcome 10

Calculate the differences between these digital times:

Start	Finish	Difference
 13.00	 17.00	4 hours
 09.00	 13.00	
 11.30	 13.30	
 10.30	 14.15	
 15.05	 17.25	

Manchester & Altrincham to Chester Train Timetable

Manchester and Altrincham to Chester

Mondays to Fridays

		A									
Manchester Piccadilly	d	0635	0738	0820	0924	1024	1124	1224	1324	1424	1524
Stockport		0646	0748	0830	0934	1034	1134	1234	1334	1434	1534
Navigation Road		0701	0803	0842	0948	1048	1148	1248	1348	1448	1548
Altrincham	a	0703	0805	0845	0950	1050	1150	1250	1350	1450	1550
	d	0704	0805	0845	0951	1051	1151	1251	1351	1451	1551
Hale		0706	0808	0847	0953	1053	1153	1253	1353	1453	1553
Ashley		07x09	08x11	-	09x56	10x56	11x56	12x56	13x56	14x56	15x56
Mobberley		07x12	08x14	-	09x59	10x59	11x59	12x59	13x59	14x59	15x59
Knutsford		0717	0819	0857	1004	1104	1204	1304	1404	1504	1604
Plumley		0721	0823	-	1008	1108	1208	1308	1408	1508	1608
Lostock Gralam		07x24	08x27	-	10x11	11x11	12x11	13x11	14x11	15x11	16x11
Northwich		0730	0832	0905	1017	1117	1217	1317	1417	1517	1617
Greenbank		0734	0837	0914a	1021	1121	1221	1321	1421	1521	1621
Cuddington		0739	0842	-	1026	1126	1226	1326	1426	1526	1626
Delamere		07x44	08x46	-	10x31	11x31	12x31	13x31	14x31	15x31	16x31
Mouldsworth		0748	0851	-	1035	1135	1235	1335	1435	1535	1635
Chester	a	0802	0905	-	1050	1150	1250	1350	1450	1550	1650

Mondays to Fridays

Manchester Piccadilly	d	1624	1650	1724	1758	1824	1924	2024	2124	2224	2308
Stockport		1634	1701	1734	1809	1834	1934	2034	2134	2234	2321
Navigation Road		1648	1719	1748	1824	1848	1948	2048	2148	2248	2335
Altrincham	a	1650	1721	1750	1826	1850	1950	2050	2150	2250	2337
	d	1651	1721	1751	1826	1851	1951	2051	2151	2251	2337
Hale		1653	1724	1753	1829	1853	1953	2053	2153	2253	2340
Ashley		16x56	17x27	17x56	18x32	18x56	19x56	20x56	21x56	22x56	23x43
Mobberley		16x59	17x30	17x59	18x35	18x59	19x59	20x59	21x59	22x59	23x46
Knutsford		1704	1735	1804	1840	1904	2004	2104	2204	2304	2350
Plumley		1708	1739	1808	1844	1908	2008	2108	2208	2308	2354
Lostock Gralam		17x11	17x42	18x11	18x47	19x11	20x11	21x11	22x11	23x11	23x58
Northwich		1717	1748	1817	1851	1917	2017	2117	2217	2317	0003
Greenbank		1721	1753	1821	1856	1921	2021	2121	2221	2321	0008
Cuddington		1726	1758	1826	1901	1926	2026	2126	2226	2326	0013
Delamere		17x31	18x02	18x31	19x05	19x31	20x31	21x31	22x31	23x31	00x17
Mouldsworth		1735	1808	1835	1911	1935	2035	2135	2235	2335	0022
Chester	a	1750	1821	1850	1922	1950	2050	2150	2250	2350	0048

Learning Outcome 11

Use the Manchester and Altrincham to Chester train timetable to answer these questions:

- 1 Including Manchester and Chester, how many stations are there on the Manchester to Chester line ?

- 2 When does the first train leave Manchester Piccadilly ?

- 3 When does the last train leave Manchester Piccadilly ?

- 4 How many trains stop at Northwich ?

- 5 How many trains stop at Plumley ?

Learning Outcome 12

Use the Manchester and Altrincham to Chester train timetable to answer these questions:

- 1 Look at the 0924 train. How long does it take for this train to get to Chester ?

- 2 How long does it take the 1624 to travel between Manchester and Altrincham ?

- 3 How long does it take the 1758 train to travel between Ashley and Delamere ?

- 4 How long does it take the 0738 train to travel between Stockport and Mouldsworth ?

- 5 How long does it take the last train from Manchester Piccadilly to reach Knutsford ?

Learning Outcome 13

Bus timetable

Service 77 Congleton - Kidsgrove - Hanley

Route:
Congleton Fairground, Market Street, Mountbatten Way, Mill Street, Ambrose Street, West Street, Newcastle Road, Childs Lane, Newcastle Road, New Road, Station Road, Kent Green Wharf, Mow Cop Bank, Mount Pleasant, Dales Green, Mow Cop Church, High Street, Harrishead, Bullocks House Road, Lowes Corner, Red Row, Whitehill Co-op, Atwood Street, Kinnersley Street, Long Row, 450, Goldenhill, Hill Street, Scotia Road, The Boulevard, Queens Avenue, Greenbank Road, Thornley Road, Heywood Road, High Lane, Hamill Road, Burslem, Cobridge, Waterton Road, Vale Piece, Potters Way, Town Road, Old Hall Street, Hanley Bus Station, returning via Stafford Street (bus stop C).

MONDAY TO FRIDAY except Bank Holidays													SATURDAY												
Congleton Fairground, Stand 1	...	07 15	09 40	12 10	14 40	17 25	18 35	07 15	09 40	12 10	14 40	17 25	18 35	07 15	09 40	12 10	14 40	17 25	18 35	07 15	09 40	12 10	14 40	17 25	18 35
Asbury Church	...	07 22	09 47	12 17	14 47	17 32	18 42	07 22	09 47	12 17	14 47	17 32	18 42	07 22	09 47	12 17	14 47	17 32	18 42	07 22	09 47	12 17	14 47	17 32	18 42
Brownlow Inn	...	07 25	09 50	12 20	14 50	17 35	18 45	07 25	09 50	12 20	14 50	17 35	18 45	07 25	09 50	12 20	14 50	17 35	18 45	07 25	09 50	12 20	14 50	17 35	18 45
Kent Green Wharf	...	07 31	09 56	12 26	14 56	17 41	18 51	07 31	09 56	12 26	14 56	17 41	18 51	07 31	09 56	12 26	14 56	17 41	18 51	07 31	09 56	12 26	14 56	17 41	18 51
Mow Cop Bank	...	07 33	09 58	12 28	14 58	17 43	18 53	07 33	09 58	12 28	14 58	17 43	18 53	07 33	09 58	12 28	14 58	17 43	18 53	07 33	09 58	12 28	14 58	17 43	18 53
Dales Green Corner	...	07 37	10 02	12 32	15 02	17 47	18 57	07 37	10 02	12 32	15 02	17 47	18 57	07 37	10 02	12 32	15 02	17 47	18 57	07 37	10 02	12 32	15 02	17 47	18 57
Mow Cop Church	...	07 40	10 05	12 35	15 05	17 50	19 00	07 40	10 05	12 35	15 05	17 50	19 00	07 40	10 05	12 35	15 05	17 50	19 00	07 40	10 05	12 35	15 05	17 50	19 00
Harrishead, Nags Head	...	07 43	10 08	12 38	15 08	17 53	19 03	07 43	10 08	12 38	15 08	17 53	19 03	07 43	10 08	12 38	15 08	17 53	19 03	07 43	10 08	12 38	15 08	17 53	19 03
Newchapel, Lowes Corner	...	07 45	10 10	12 40	15 10	17 55	19 05	07 45	10 10	12 40	15 10	17 55	19 05	07 45	10 10	12 40	15 10	17 55	19 05	07 45	10 10	12 40	15 10	17 55	19 05
Whitehill, Mount Road	07 06	07 46	10 11	12 41	15 11	17 56	19 06	07 06	07 46	10 11	12 41	15 11	17 56	07 06	07 46	10 11	12 41	15 11	17 56	07 06	07 46	10 11	12 41	15 11	17 56
Kidsgrove Kinnersley Street	07 09	07 49	10 14	12 44	15 14	17 59	19 09	07 09	07 49	10 14	12 44	15 14	17 59	07 09	07 49	10 14	12 44	15 14	17 59	07 09	07 49	10 14	12 44	15 14	17 59
Latebrook, Chatterley Drive	07 13	07 56	10 18	12 48	15 18	18 03	19 13	07 13	07 56	10 18	12 48	15 18	18 03	07 13	07 56	10 18	12 48	15 18	18 03	07 13	07 56	10 18	12 48	15 18	18 03
Tunstall, Scotia Rd, opposite Police Station	07 22	08 05	10 29	12 59	15 29	18 14	19 24	07 22	08 05	10 29	12 59	15 29	18 14	07 22	08 05	10 29	12 59	15 29	18 14	07 22	08 05	10 29	12 59	15 29	18 14
Stanfields, The Dose	07 27	08 10	10 34	13 04	15 34	18 19	19 29	07 27	08 10	10 34	13 04	15 34	18 19	07 27	08 10	10 34	13 04	15 34	18 19	07 27	08 10	10 34	13 04	15 34	18 19
Burslem, Swan Bank	07 32	08 15	10 41	13 11	15 41	18 26	19 36	07 32	08 15	10 41	13 11	15 41	18 26	07 32	08 15	10 41	13 11	15 41	18 26	07 32	08 15	10 41	13 11	15 41	18 26
Hanley City Centre Bus Station	07 42	08 25	10 51	13 21	15 51	18 36	19 46	07 42	08 25	10 51	13 21	15 51	18 36	07 42	08 25	10 51	13 21	15 51	18 36	07 42	08 25	10 51	13 21	15 51	18 36

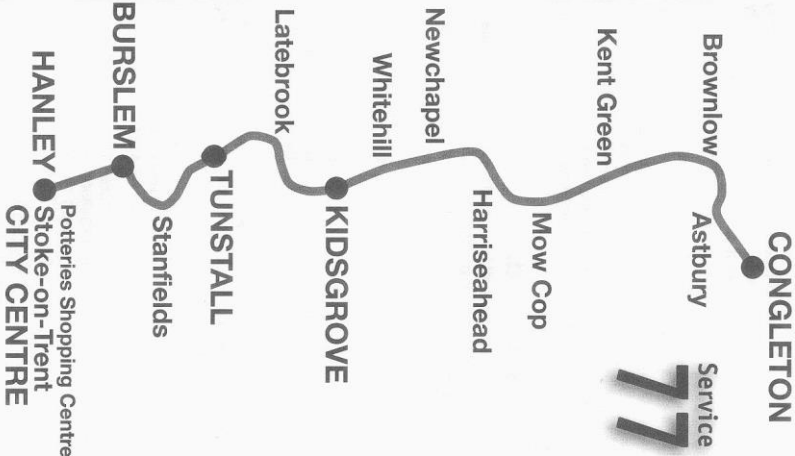
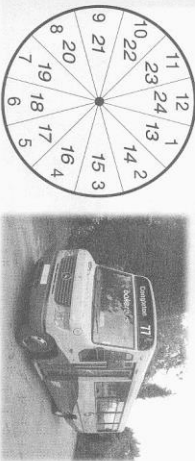
Service 77 Hanley - Kidsgrove - Congleton

MONDAY TO FRIDAY except Bank Holidays													SATURDAY															
Hanley City Centre Bus Stn, Stand 31	08 30	10 56	13 26	16 10	17 26	18 45	08 30	10 56	13 26	16 10	17 45	18 45	08 30	10 56	13 26	16 10	17 45	18 45	08 30	10 56	13 26	16 10	17 45	18 45				
Burslem, Swan Bank	.....	08 42	11 08	13 38	16 18	17 38	18 57	.....	08 42	11 08	13 38	16 18	17 38	18 57	.....	08 42	11 08	13 38	16 18	17 57	18 57	.....	08 42	11 08	13 38	16 18	17 57	18 57
Stanfields, The Goose	.....	08 47	11 13	13 43	16 23	17 43	19 02	.....	08 47	11 13	13 43	16 23	17 43	19 02	.....	08 47	11 13	13 43	16 23	18 02	19 02	.....	08 47	11 13	13 43	16 23	18 02	19 02
Tunstall, Scotia Rd, Police Station	06 53	08 52	11 18	13 48	16 28	17 48	19 07	06 53	08 52	11 18	13 48	16 28	17 48	19 07	06 53	08 52	11 18	13 48	16 28	18 07	19 07	06 53	08 52	11 18	13 48	16 28	18 07	19 07
Latebrook, Chatterley Drive	06 42	09 01	11 27	13 57	16 37	17 57	19 16	06 42	09 01	11 27	13 57	16 37	17 57	19 16	06 42	09 01	11 27	13 57	16 37	18 16	19 16	06 42	09 01	11 27	13 57	16 37	18 16	19 16
Kidsgrove Kinnersley Street	06 46	09 05	11 31	14 01	16 41	18 01	19 20	06 46	09 05	11 31	14 01	16 41	18 01	19 20	06 46	09 05	11 31	14 01	16 41	18 16	19 20	06 46	09 05	11 31	14 01	16 41	18 16	19 20
Whitehill Mount Road	06 49	09 08	11 34	14 04	16 44	18 04	19 23	06 49	09 08	11 34	14 04	16 44	18 04	19 23	06 49	09 08	11 34	14 04	16 44	18 23	19 23	06 49	09 08	11 34	14 04	16 44	18 23	19 23
Newchapel, Lowes Corner	V	09 09	11 35	14 05	16 45	18 05	19 24	V	09 09	11 35	14 05	16 45	18 05	19 24	V	09 09	11 35	14 05	16 45	18 24	19 24	V	09 09	11 35	14 05	16 45	18 24	19 24
Harrishead, Nags Head	V	09 11	11 37	14 07	16 47	18 07	19 26	V	09 11	11 37	14 07	16 47	18 07	19 26	V	09 11	11 37	14 07	16 47	18 26	19 26	V	09 11	11 37	14 07	16 47	18 26	19 26
Mow Cop Church	V	09 13	11 39	14 09	16 49	18 09	19 28	V	09 13	11 39	14 09	16 49	18 09	19 28	V	09 13	11 39	14 09	16 49	18 28	19 28	V	09 13	11 39	14 09	16 49	18 28	19 28
Dales Green Corner	06 53	09 17	11 43	14 13	16 53	18 13	19 32	06 53	09 17	11 43	14 13	16 53	18 13	19 32	06 53	09 17	11 43	14 13	16 53	18 32	19 32	06 53	09 17	11 43	14 13	16 53	18 32	19 32
Mow Cop Bank	06 57	09 21	11 47	14 17	16 57	18 17	19 36	06 57	09 21	11 47	14 17	16 57	18 17	19 36	06 57	09 21	11 47	14 17	16 57	18 36	19 36	06 57	09 21	11 47	14 17	16 57	18 36	19 36
Kent Green Wharf	06 59	09 23	11 49	14 19	16 59	18 19	19 38	06 59	09 23	11 49	14 19	16 59	18 19	19 38	06 59	09 23	11 49	14 19	16 59	18 38	19 38	06 59	09 23	11 49	14 19	16 59	18 38	19 38
Brownlow Inn	07 05	09 29	11 55	14 25	17 05	18 25	19 44	07 05	09 29	11 55	14 25	17 05	18 25	19 44	07 05	09 29	11 55	14 25	17 05	18 44	19 44	07 05	09 29	11 55	14 25	17 05	18 44	19 44
Asbury Church	07 08	09 32	11 58	14 28	17 08	18 28	19 47	07 08	09 32	11 58	14 28	17 08	18 28	19 47	07 08	09 32	11 58	14 28	17 08	18 47	19 47	07 08	09 32	11 58	14 28	17 08	18 47	19 47
Congleton Fairground	07 15	09 39	12 05	14 35	17 15	18 35	19 54	07 15	09 39	12 05	14 35	17 15	18 35	19 54	07 15	09 39	12 05	14 35	17 15	18 54	19 54	07 15	09 39	12 05	14 35	17 15	18 54	19 54

V bus does not call at this point
Service 9 (Wines) and 99 provide additional journeys to and from Hanley via Biddulph.

Twenty four hour clock

All our bus timetables are presented in twenty four hour format, in common with most travel and transport operators, and which avoids confusion between morning and afternoon journeys. We hope you will find the clock face shown helpful.



Learning Outcome 13

Calculate journey times for more than one type of transport

Use the Manchester and Altrincham to Chester train timetable and the Congleton to Hanley number 77 bus timetable to answer these questions:

- 1 How long does it take the train to travel from Manchester to Lostock Gralam ?

- 2 How long does it take the train to travel from Navigation Road to Cuddington ?

- 3 Mondays – Fridays, how long does it take the 1835 *bakerbus* to travel from Congleton to Kidsgrove ?

- 4 Saturdays - how long does it take the 0940 *bakerbus* to travel between Tunstall and Hanley ?

Learning Outcome 14

Calculate the lengths of television programmes from the television guide.

Look at the news broadcasts. Write down the times of two news broadcasts and calculate how long each broadcast lasts. Complete this table:

Time of News Broadcast	Broadcast Lasts

Write down the names of three 'soaps' in the guide. Then calculate how long each programme lasts and complete this table:

Soap	Programme lasts

Now choose four other programmes and calculate how long each programme lasts. Complete this table:

Name of Programme	Programme lasts

Learning Outcome 15

Task:

Calculate the total length of time of three consecutive television programmes.

Hint:

Consecutive means following one after another.

Use the television guide to choose three consecutive programmes.
Complete this table:

Name of Programme	Programme lasts
1	
2	
3	

Now add up the times to find the total - use this space for working out.

Working out

Complete the sentence:

The total length of time of the three consecutive television programmes is _____.

Learning Outcome 16

Task:

Calculate the number of editions (episodes) of Coronation Street that can be recorded on a 5 hour DVD-R.

Use the television guide to calculate how long one episode of **Coronation Street** lasts. Complete this sentence:

One edition of **Coronation Street** lasts _____.

Now check with the television guide. Do all episodes of **Coronation Street** last the same time ? YES / NO

Now work out how many episodes can be recorded on a 5 hour disk - use this space for working out.

Working out

Hint:

Which operation will you use ? $+$ $-$ \times \div

Complete the sentence:

I can record _____ episodes of **Coronation Street** on a 5 hour DVD-R disk.