P6 MATHS SUMMER BOOKLET

Group 3

Name: _Answers_

Mixed number work

$7 \times 6 = 42$ $4 \times 7 = 28$ $36 \div 6 = 6$
$5 \times 3 = 15$ $6 \times 6 = 36$ $14 \div 2 = 7$
$2 \times 8 = 16$ $7 \times 3 = 21$ $21 \div 3 = 7$
$3 \times 9 = 27$ $10 \times 9 = 90$ $56 \div 8 = 7$
$5 \times 11 = 55$ $9 \times 9 = 81$ $24 \div 4 = 6$
$6 \times 8 = 48$ $7 \times 9 = 63$ $35 \div 5 = 7$
$4 \times 9 = 36$ $8 \times 8 = 64$ $70 \div 7 = 10$

```
   3 4 8 2        2 0 7 2        3 4 8 9
 - 1 9 7 8      - 1 9 5 8      + 2 7 6 3
 ─────────      ─────────      ─────────
   1 5 0 4        1 1 4          6 2 5 2
```

```
   2 8 9 4        3 1 9 5        3 6 2 8
 x       7      - 1 7 8 6      x       6
 ─────────      ─────────      ─────────
  20 2 5 8        1 4 0 9       21 7 6 8
```

```
      9 9 2          2 2 4 4          1 4 5 r4
 3) 2 9 7 6     4) 8 9 7 6      5) 7 2 9
```

```
    1 2 7 8 r4        8 2 5 r3        1 2 3
 7) 8 9 5 0     9) 7 4 2 8      6) 7 3 8
```

Multiplication Practice – 2 Digits x 2 Digits **Answers**

1.

			3	6
x			3	2
			7	2
	1	0	8¹	0
	1	1¹	5	2

1

2.

			4	6
x			3	3
		1	3	8
	1	3	8¹	0
	1	5¹	1	8

1

3.

			1	6
x			3	3
			4	8
		4	8¹	0
	5¹	2	8	

1

4.

			1	4
x			2	3
			4	2
		2	8¹	0
		3	2	2

1

5.

			2	5
x			3	6
		1	5	0
		7	5³	0
		9¹	0	0

1

6.

			3	5
x			5	6
		2	1	0
	1	7	5³	0
1¹	9²	6	0	

7.

			3	4
x			2	3
		1	0	2
		6	8¹	0
		7	8	2

8.

			4	3
x			3	3
		1	2	9
	1	2	9	0
	1	4	1	9

1

9.

			4	2
x			2	5
		2	1	0
		8	4¹	0
	1	0	5	0

1

10.

			4	6
x			1	6
		2	7	6
	4²	6³	0	
	7³	3	6	

1

11.

			5	2
x			2	6
		3	1	2
	1	0	4¹	0
	1	3	5	2

12.

			3	2
x			5	2
			6	4
	1	6	0	0
	1	6¹	6	4

NUMBER BONDS TO 500   Name _____

Set A

304	+	196	=	500
30	+	470	=	500
140	+	360	=	500
237	+	263	=	500
362	+	138	=	500
96	+	404	=	500
478	+	22	=	500
216	+	284	=	500
463	+	37	=	500
431	+	69	=	500

Set B

30	+	470	=	500
318	+	182	=	500
421	+	79	=	500
66	+	434	=	500
353	+	147	=	500
160	+	340	=	500
235	+	265	=	500
384	+	116	=	500
310	+	190	=	500
268	+	232	=	500

Set C

447	+	53	=	500
39	+	461	=	500
490	+	10	=	500
90	+	410	=	500
228	+	272	=	500
27	+	473	=	500
5	+	495	=	500
288	+	212	=	500
305	+	195	=	500
186	+	314	=	500

Set D

248	+	252	=	500
212	+	288	=	500
173	+	327	=	500
428	+	72	=	500
44	+	456	=	500
390	+	110	=	500
328	+	172	=	500
249	+	251	=	500
225	+	275	=	500
413	+	87	=	500

Missing Numbers (4)

Fill in the missing numbers on the number lines.

Name_____

① | 8150 | 8151 | 8152 | 8153 | 8154 |

② | 1861 | 1862 | 1863 | 1864 | 1865 |

③ | 4557 | 4558 | 4559 | 4560 | 4561 |

④ | 7014 | 7015 | 7016 | 7017 | 7018 |

⑤ | 6836 | 6837 | 6838 | 6839 | 6840 |

⑥ | 8911 | 8912 | 8913 | 8914 | 8915 |

⑦ | 9274 | 9275 | 9276 | 9277 | 9278 |
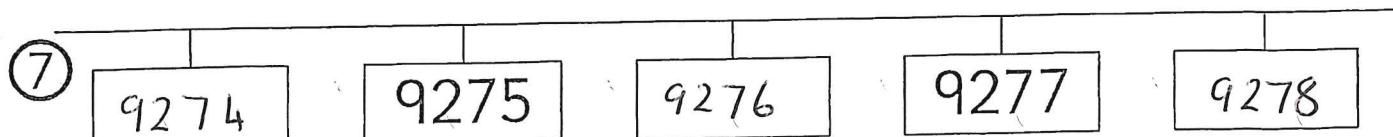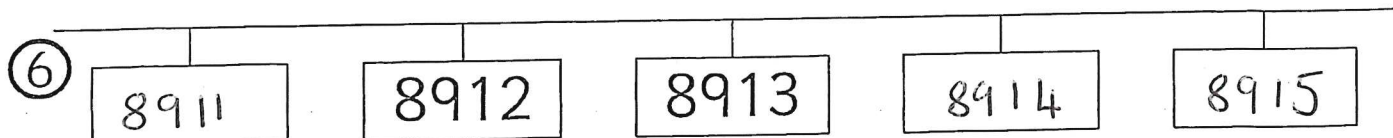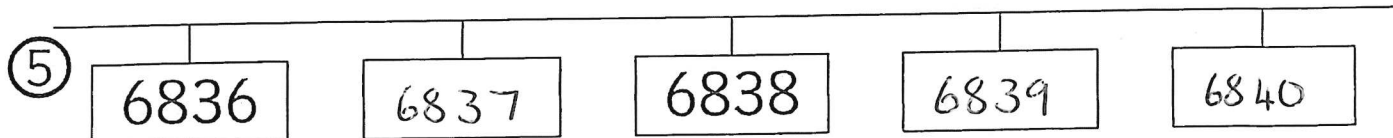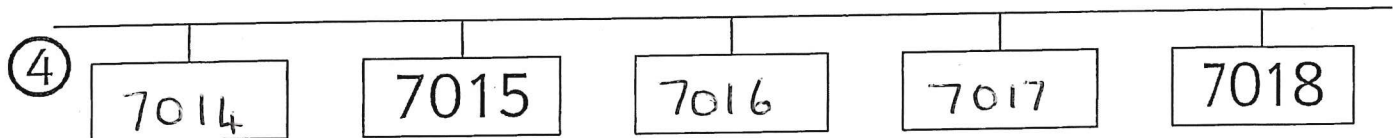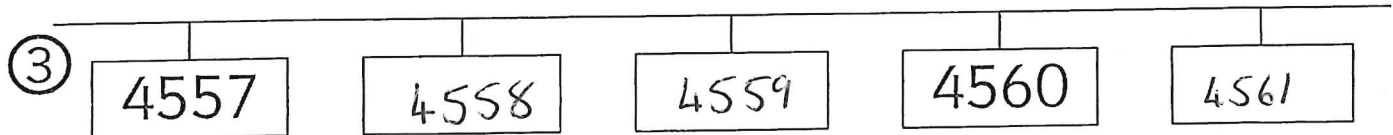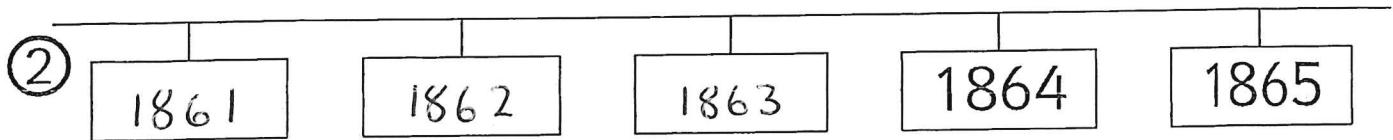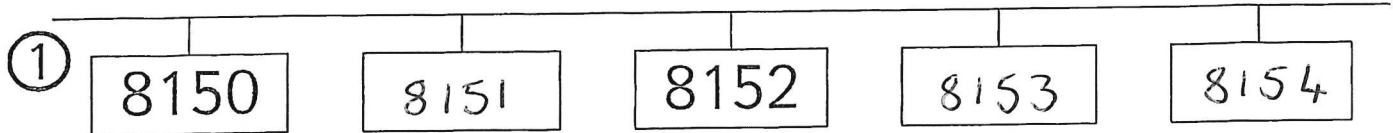
Order the numbers. Least → greatest.

1. 2.6 2.6
7.1 5.3
7.8 5.8
7.2 7.1
5.8 7.2
5.3 7.8

2. 4.2 2.8
9.1 4.2
2.8 5.3
7.3 7.3
5.3 9.1
9.3 9.3

3. 7.5 1.4
8.6 2.3
2.3 2.8
7.6 7.5
2.8 7.6
1.4 8.6

4. 5.9 3.1
3.1 4.4
4.4 3.5
4.6 7.6
5.9 4.6
7.6

5. 4.6 1.3
1.3 2.3
2.3 3.4
3.4 4.6
4.6 6.4
6.4 8.1
8.1

6. 4.7 1.6
1.6 8.2
4.7 4.9
4.9 7.9
5.7 1.6
7.9 5.7
8.2

7. 4.8 2.3
2.3 8.6
4.8 5.9
4.9 4.9
5.5 9.9
8.6 2.3
9.9

8. 5.6 2.3
2.3 5.3
2.5 8.1
5.3 7.2
5.6 2.5
7.2 2.3
8.1

9. 5.5 1.1
1.1 5.8
1.2 5.6
2.4 1.1
5.5 2.4
5.6 1.2
5.8

10. 1.7 1.2
1.2 1.2
1.7 7.7
4.2 4.2
6.7 8.1
7.7 6.7
8.1

11. 8.3 2.3
2.3 2.9
2.9 8.5
4.7 4.7
5.6 5.6
8.3 2.3
8.5

12. 3.7 3.1
3.1 3.1
3.7 8.7
6.5 8.7
7.5 6.5
8.7 7.5
8.7

Fractions of numbers.

$\frac{1}{2}$ of 30 = 15

$\frac{1}{2}$ of 84 = 42

$\frac{1}{2}$ of 26 = 13

$\frac{1}{2}$ of 18 = 9

$\frac{1}{4}$ of 20 = 5

$\frac{1}{4}$ of 44 = 11

$\frac{1}{4}$ of 12 = 3

$\frac{1}{4}$ of 100 = 25

$\frac{1}{3}$ of 12 = 4

$\frac{1}{3}$ of 30 = 10

$\frac{1}{3}$ of 120 = 40

$\frac{1}{3}$ of 63 = 21

$\frac{1}{5}$ of 20 = 4

$\frac{1}{5}$ of 50 = 10

$\frac{1}{5}$ of 10 = 2

$\frac{1}{5}$ of 30 = 6

$\frac{2}{10}$ of 70 = 14

$\frac{3}{6}$ of 30 = 15

$\frac{2}{4}$ of 48 = 24

$\frac{3}{9}$ of 81 = 27

$4/6$ of 12 = 8

$8/9$ of 45 = 40

Peter had 20 sweets. He ate $\frac{2}{5}$. How many did he have left? 12

Sara had 80 marbles. She gave $\frac{1}{4}$ away. How many did she give away?
          20

Mary had £12·60. She spent $\frac{1}{2}$ of her money. How much did she spend?   £6·30

A book costing £36 had $\frac{1}{4}$ off. What is the sale price?
          £27

Multiplying and dividing by 10 and 100 (5c)

Name_____

in ⇨ (x10) ⇨ out

in	64	835	703	3846	22	1828
out	640	8350	7030	38460	220	18280

in ⇨ (x100) ⇨ out

in	1	33	299	87	38	79
out	100	3300	29900	8700	3800	7900

in ⇨ (÷100) ⇨ out

in	8515	1225	2824	416	83	6384
out	85.15	12.25	28.24	4.16	0.83	63.84

in ⇨ (÷10) ⇨ out

in	9104	996	6306	169	899	5
out	910.4	99.6	630.6	16.9	89.9	0.5

Group 3 problem solving

1. 36 children eat school dinners and each child is given 15 chips. How many chips need to be cooked? 540	2. Pete had £18.72. He spent £4.42 on pens and £7.48 on paper. How much did he have left? £6.82
3. A Play station game cost £30. There was 20% off in a sale. What was the price of the game? £24	4. A car travels at 37 miles per hour. How many miles will it travel in 12 hours? 444
5. 7320 pencils are shared between 5 classes. How many pencils does each class receive? 1464	6. 348 people go to a concert. Each ticket costs £9. How much money was collected altogether? £3132

Whole numbers – ordering numbers to 9999

Ascending means going up. When we put numbers in ascending order it means we put them in order smallest to largest.

For example:
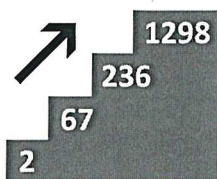
Descending means going down. When we put numbers in descending order it means we put them in order largest to smallest.

For example:
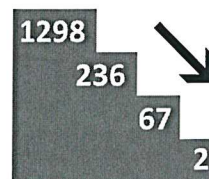
1 Write the numbers which come before and after the given number:

a | 1092 | 1093 | 1094 |

b | 6528 | 6529 | 6530 |

2 Circle the smallest number and underline the largest number in each group:

a   837   542   (261)

b   999   (909)   929

c   (1024)   3852   7203

d   5469   5117   (5078)

3 Re-write the following sets of numbers in ascending order:

a   3203   2033   2303   2033,   2303,   3203

b   6660   6066   6606   6066,   6606,   6660

4 Re-write the following sets of numbers in descending order:

a   4156   4651   4561   4651,   4561,   4156

b   7891   7981   7356   7981,   7891,   7356

5 Look closely at the grid and fill in the missing spaces with the correct numbers.

a

515	516				
525	526	527	528		
		537	538	539	540
				549	550

b

863	864	865
873	874	875
883	884	885

c

986	987	988
996	997	998
1006	1007	1008

Whole numbers – create and compare numbers

When we compare numbers we use these symbols:

>

This symbol means is greater (more) than.

<

This symbol means is less than.
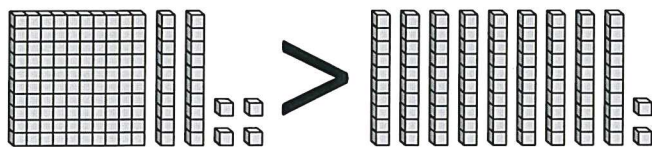
124 is greater than 92

124 is > 92
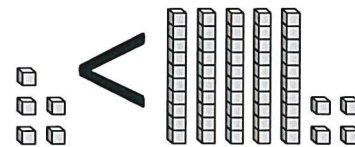
5 is less than 54

5 is < 54

1 Use the correct >, < or = symbol:

a 203 | > | 172

b 3033 | = | 3033

c 572 | < | 615

d 5690 | > | 5688

e 909 | > | 901

f 9009 | < | 9090

2 Put a number in the box so the statement is true:

a [ ] > 6890

b [ ] > 603

c [ ] > 1204

d [ ] > 8051

3 Put a number in the box so the statement is true:

a 45 < [ ]

b 564 < [ ]

c 7895 < [ ]

d 9984 < [ ]

4 Use the correct > or < symbol to make the number sentences true:

a 15 | > | 14 | < | 16

b 98 | < | 1005 | < | 2010

c 17 | < | 18 | < | 21

d 7586 | > | 528 | > | 29

Measuring time – time relationships

Connect these time facts:

1 minute	24-hours		1 year	10 years
1 hour	365 days		1 fortnight	100 years
1 day	60 seconds		1 decade	12 months
1 year	60 minutes		1 century	14 days

1 **How many minutes are there in the following hours?**

a 2 hours = $\boxed{120}$ minutes

b $\frac{1}{4}$ hour = $\boxed{15}$ minutes

c $\frac{1}{2}$ hour = $\boxed{30}$ minutes

d $\frac{3}{4}$ hour = $\boxed{45}$ minutes

e 4 hours = $\boxed{240}$ minutes

f 6 hours = $\boxed{360}$ minutes

2 **How many seconds are there in the following times?**

> I need to remember to change hours to minutes first. Then I can convert to seconds.

a 2 minutes = $\boxed{120}$ seconds

b 5 minutes = $\boxed{300}$ seconds

c 1 hour = $\boxed{3600}$ seconds

d $\frac{1}{2}$ hour = $\boxed{1800}$ seconds

e $\frac{1}{2}$ minute = $\boxed{30}$ seconds

f $\frac{1}{4}$ hour = $\boxed{900}$ seconds

THINK

3 **Use the information in the top box to work out these time facts:**

a 1 decade = $\boxed{120}$ months

b 1 century = $\boxed{100}$ years

c 2 fortnights = $\boxed{28}$ days

d $\frac{1}{2}$ century = $\boxed{50}$ years

e 1 week = $\boxed{168}$ hours

f 2 years = $\boxed{730}$ days

4 **What time unit would you use to measure each of the following?**

Time to hard boil an egg ___minutes___

One millennium ___years___

One leap year ___days___

Length of a football match ___minutes___

Time
Copyright © 3P Learning
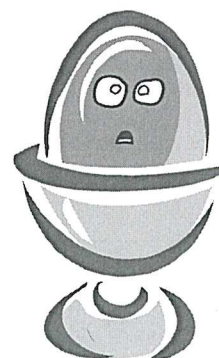
Measuring time – reading analogue clocks

1 Draw a line from each clock to its matching time in words:
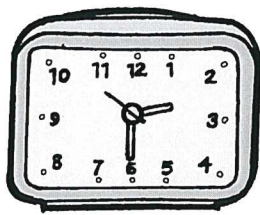
quarter to 8

half past 2
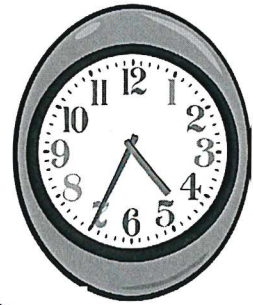
25 minutes to 5

25 minutes past 3
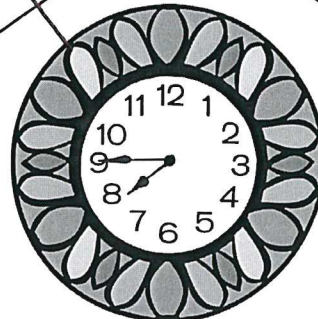
2 Draw the hands on these clocks:
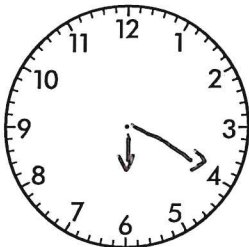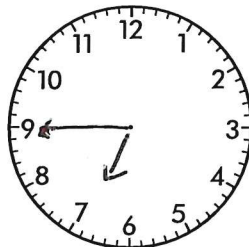
a 20 minutes past 6   b quarter to 7   c 16 minutes past 4   d 25 minutes to 9
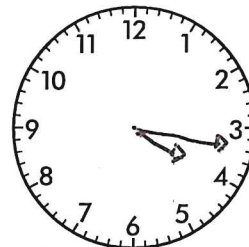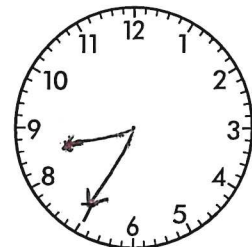
3 Using 'to' and 'past', write the time displayed on each clock:
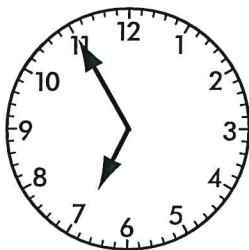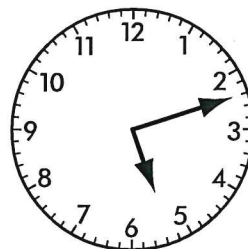
a _5 minutes to 7_
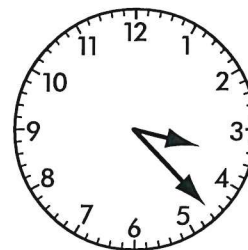
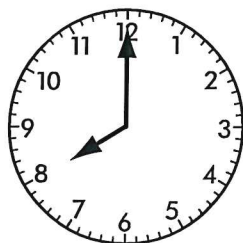b _23 minutes past 3_
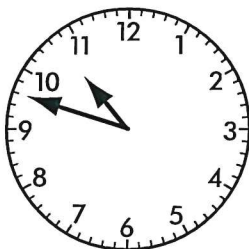
c _12 minutes to 11_

d _12 minutes past 5_

Time

Measuring time – am and pm notation

We use am and pm with digital time.

am ⟶ The part of the day between 12 midnight and 12 noon.

pm ⟶ The part of the day between 12 noon and 12 midnight.

1 Express these times in digital form using am or pm:

morning

a `8:00 am`
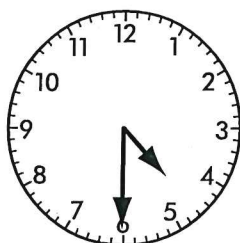
afternoon

b `4:30 pm`

evening

c `11:25 pm`
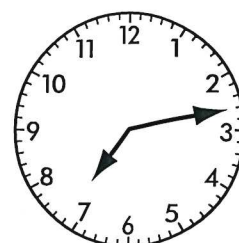
morning

d `7:13 am`

morning

e `7:01 am`

evening

f `10:20 pm`
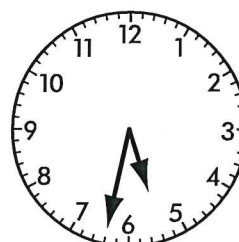
afternoon

g `5:32 pm`

morning

h `9:10 am`

2 Draw hands on these analogue clocks to match the digital times:
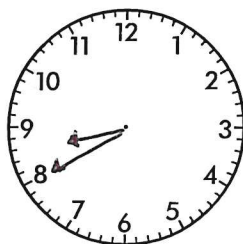
a `8:40 am`
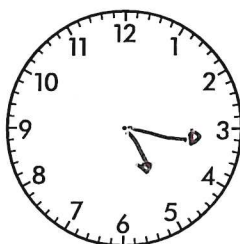
b `5:16 pm`
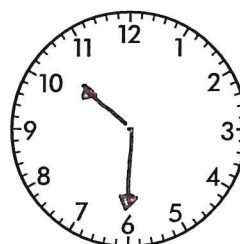
c `10:30 am`

d `12:18 pm`

3 Put these times in order from earliest to latest. Express the times in digital form:
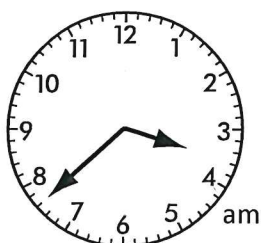
quarter past 5
in the evening

`11:10 am`

am

pm
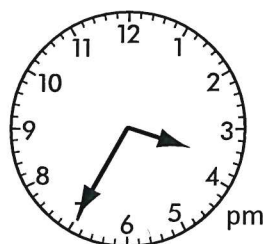
1 `11:10 am`

2 `11:38 am`

3 `3:35 pm`

4 `5:15 pm`

Time

Measuring time – 24-hour time

Time is can be measured using 12-hour time, using am or pm, or 24-hour time. This clock shows 24-hour time on the grey outside ring.
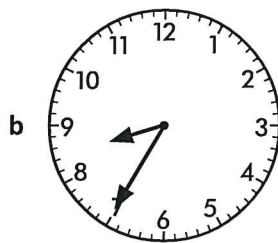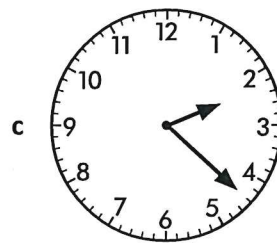
5:00 pm = 17:00
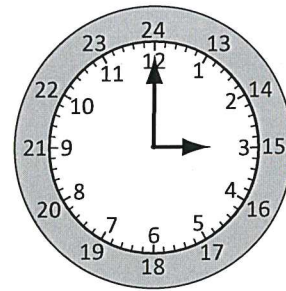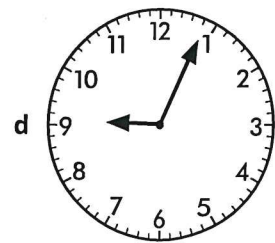
1 Write the digital time for each clock face.
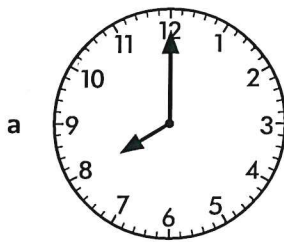
a
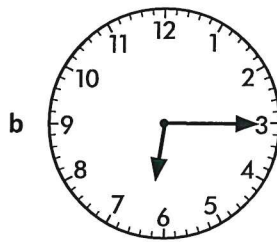$5:00$ am

b
$8:35$ pm

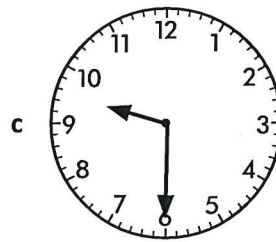c
$2:22$ am
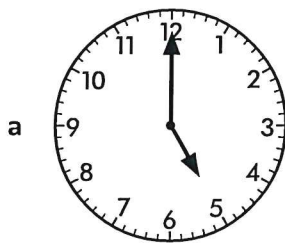
d
$9:04$ pm

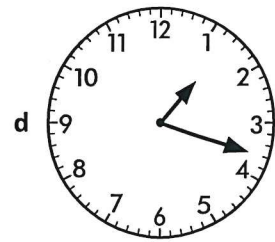**2** Write the 24-hour time for each clock face.

a
08 : 00
20 : 00

b
06 : 15
18 : 15

c
09 : 30
21 : 30

d
01 : 18
13 : 18

3 Convert these digital times to 24-hour times.

a 5:15 pm = $17:15$

b 8:39 am = $08:39$

c 4:07 pm = $16:07$

4 Convert these 24-hour times to digit times.

a 16:15 = $4.15\ pm$

b 10:43 = $10.43\ am$

c 01:34 = $1.34\ am$

F SERIES   1 TOPIC

Time

Written methods – short multiplication

3 Below are Jess and Harry's tests. Check them and give them a mark out of 5. If they made mistakes, give them some feedback as to where they went wrong.

Jess

```
        3   8   7
  ×             2
  ─────────────────
        7   7   4
       [1]     [1]
```
✓

```
        1   1   9
  ×             7
  ─────────────────
        7   7   3
       □       □
```
✗

```
    2   2   0   3
  ×             3
  ─────────────────
    6   6   0   9
   □   □   □   □
```
✓

```
        4   3   6
  ×             3
  ─────────────────
    1   2   0   8
   □   □   [1]
```
✗

```
        4   0   1
  ×             7
  ─────────────────
    2   8   0   7
   □   □   □
```
✓

Harry

```
        3   8   7
  ×             2
  ─────────────────
        7   7   4
       [1]     [1]
```
✓

```
        1   1   9
  ×             7
  ─────────────────
        8   3   3
       [1]     [6]
```
✓

```
    3   2   0   3
  ×             3
  ─────────────────
        9   6   9
   □   □   □
```
✗

```
        4   3   6
  ×             3
  ─────────────────
    1   3   0   8
   □   [1]    [1]
```
✓

```
    1   4   0   1
  ×             7
  ─────────────────
    7   2   8   7
   □   □   □
```
✗

Written methods – short division

In short division, we use our knowledge of multiplication to help us. We can split 936 into 900 + 30 + 6.

```
    3 ┊ 1 ┊ 2
3 │ 9 ┊ 3 ┊ 6
```

900 divided by 3 is 300, so we put a 3 in the hundreds place.

30 divided by 3 is 10, so we put a 1 in the tens place.

6 divided by 3 is 2, so we put a 2 in the ones place.

936 ÷ 3 = 312

1   **Divide these numbers:**

a
```
    2 ┊ 1
4 │ 8 ┊ 4
```

b
```
    1 ┊ 1
5 │ 5 ┊ 5
```

c
```
    3 ┊ 1
3 │ 9 ┊ 3
```

d
```
    1 ┊ 1 ┊ 0
9 │ 9 ┊ 9 ┊ 0
```

e
```
    1 ┊ 2 ┊ 1
4 │ 4 ┊ 8 ┊ 4
```

f
```
    1 ┊ 1 ┊ 1
6 │ 6 ┊ 6 ┊ 6
```

g
```
    3 ┊ 3 ┊ 3
3 │ 9 ┊ 9 ┊ 9
```

h
```
    2 ┊ 3 ┊ 1
2 │ 4 ┊ 6 ┊ 2
```

i
```
    2 ┊ 3 ┊ 1
3 │ 6 ┊ 9 ┊ 3
```

Sometimes it's easier to split the numbers differently. We can also split 936 into 900 + 36.

```
    3 ┊ 1 ┊ 2
3 │ 9 ┊ 3 ┊ 6
```

900 divided by 3 is 300 so we put a 3 in the hundreds place

36 divided by 3 is 12. We put the 1 in the tens place and the 2 in the ones place.

936 ÷ 3 = 312

> In these problems, if there are no tens in a number we put a 0 in to show this and also to hold the place of the other numbers!

2   **Decide how you'll split these numbers and then divide. Remember to put in zeros as needed.**

a
```
    1 ┊ 0 ┊ 3
5 │ 5 ┊ 1 ┊ 5
```

b
```
    2 ┊ 2 ┊ 3
3 │ 6 ┊ 6 ┊ 9
```

c
```
    1 ┊ 0 ┊ 3
9 │ 9 ┊ 2 ┊ 7
```

d
```
    2 ┊ 0 ┊ 1
4 │ 8 ┊ 0 ┊ 4
```

e
```
    2 ┊ 0 ┊ 3
4 │ 8 ┊ 1 ┊ 2
```

Multiplication and Division

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Written methods – short division

Sometimes a number doesn't easily split and we have to use a different method to solve a division.

```
    1 : 6 : 6
      [3]  [3]
5 | 8 : 3 : 0
```

Look at 830 divided by 5. We start with the largest place value.
8 hundreds divided by 5 is 100. There is 300 left over, which we rename and carry over to the tens column. 33 tens divided by 5 is 6 with 3 left over. We rename and carry these 3 tens to the ones. 30 divided by 5 is 6 exactly.

So **830 ÷ 5 = 166**

3 Solve these divisions:

a.
```
    1 : 2 : 3
6 | 7 : 3 : 8
```

b.
```
    1 : 7 : 3
5 | 8 : 6 : 5
```

c.
```
    2 : 3 : 4
3 | 7 : 0 : 2
```

d.
```
    2 : 3 : 6
4 | 9 : 4 : 4
```

e.
```
      : 9 : 3
8 | 7 : 4 : 4
```

f.
```
    1 : 0 : 6
9 | 9 : 5 : 4
```

g.
```
      6 : 8 : 4
7 | 4 : 7 : 8 : 8
```

h.
```
    2 : 3 : 6 : 7
4 | 9 : 4 : 6 : 8
```

i.
```
      8 : 6 : 9
3 | 2 : 6 : 0 : 7
```

j.
```
    1 : 0 : 3 : 6
6 | 6 : 2 : 1 : 6
```

k.
```
    1 : 2 : 3 : 4
8 | 9 : 8 : 7 : 2
```

l.
```
      5 : 8 : 9
5 | 2 : 9 : 4 : 5
```

4 Solve these problems:

a. Four friends find £936 in the street. They take it to the police but no-one claims it and the money is eventually returned to them to keep. If they share it fairly between themselves, how much do they get each?

£234

b. A carpenter has a piece of timber 1,878 mm long. He needs to split it into 6 equal pieces. How long should each piece be?

313 mm

Written methods – division with remainders

Sometimes numbers don't divide evenly. The amount left over is called the **remainder**.

Look at 527 divided by 5.

500 divided by 5 is 100.

27 divided by 5 is 5 with 2 left over (this is the remainder).

This can be written as r 2.

527 ÷ 5 = 105 r 2.

$$\begin{array}{c|ccc} & 1 & 0 & 5 \; r\, 2 \\ \hline 5 & 5 & 2 & 7 \end{array}$$

9 Divide these 2-digit numbers. Each problem will have a remainder.

a 9) 7 5   → 8 r 3

b 4) 4 7   → 1 1 r 3

c 6) 3 8   → 0 6 r 2

d 5) 6 3   → 1 2 r 3

e 4) 4 9   → 1 2 r 1

f 6) 6 2   → 1 0 r 2

10 Divide these 3-digit numbers. Each problem will have a remainder.

a 5) 5 5 7   → 1 1 1 r 2

b 3) 6 6 1   → 2 2 0 r 1

c 4) 4 8 1   → 1 2 0 r 1

d 9) 9 9 4   → 1 1 0 r 4

e 6) 6 9 4 5   → 1 1 5 7 r 3

f 4) 8 9 6 3   → 2 2 4 0 r 3

11 Solve these problems:

a Giovanni's Nan has given him a bag of gold coins to share among him and his two sisters. There are 47 gold coins altogether. How many does each child get if they're shared evenly? How would you suggest they deal with the remainder?   15

b You have 59 jelly beans to add to party bags. Each bag gets five jelly beans. How many full party bags can you make?   11 r 4

Multiplication and Division

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