

# Yr 3 Place value Unit 1 (3931)

## Additional teacher instructions for practice sheets

These notes indicate which practice sheets are most appropriate for which groups.

### Day 1 Mystery numbers Sheet 1

Working towards ARE / Working at ARE

Working towards ARE children can use place value cards to make the numbers fulfilling the criteria given.

### Day 1 Mystery numbers Sheet 2

Greater Depth

Children complete without a number grid, using their knowledge of place value.

### Day 2 Making 4-digit numbers Sheet 1

Working towards ARE / Working at ARE / Greater Depth

Working towards ARE use place value cards to make the numbers.

Greater Depth should complete the Challenge.

### Day 3 3-digit numbers Sheet 1

Working towards ARE

Aim to complete the sheet AND attempt some questions on Sheet 2.

### Day 3 4-digit numbers Sheet 2

Working at ARE / Greater Depth

Greater Depth should complete the Challenge.

# Mystery numbers

## Sheet 1

Answer the questions using the number grid provided:

1. What number comes after 1053?
2. What number comes after 1029?
3. What number comes before 1080?
4. What number comes before 1011?
5. What number comes between 1032 and 1034?
6. What number comes between 1089 and 1091?
7. What number is 30 less than 1072?
8. What number is 42 more than 1049?

1001	1002	1003	1004	1005	1006	1007	1008	1009	1010
1011	1012	1013	1014	1015	1016	1017	1018	1019	1020
1021	1022	1023	1024	1025	1026	1027	1028	1029	1030
1031	1032	1033	1034	1035	1036	1037	1038	1039	1040
1041	1042	1043	1044	1045	1046	1047	1048	1049	1050
1051	1052	1053	1054	1055	1056	1057	1058	1059	1060
1061	1062	1063	1064	1065	1066	1067	1068	1069	1070
1071	1072	1073	1074	1075	1076	1077	1078	1079	1080
1081	1082	1083	1084	1085	1086	1087	1088	1089	1090
1091	1092	1093	1094	1095	1096	1097	1098	1099	1100

### Challenge

Write three more questions of your own with the answers.

# Mystery numbers

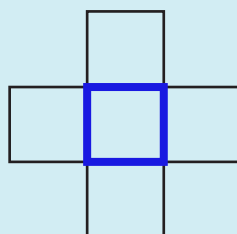
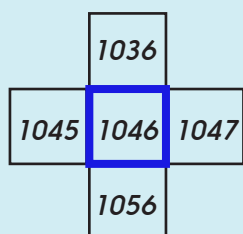
## Sheet 2

Answer the following questions:

1. What number comes after 1053?
2. What number comes after 1229?
3. What number comes ten after 1583?
4. What number comes before 1480?
5. What number comes before 1019?
6. What number comes ten before 1101?
7. What number comes between 1332 and 1334?
8. What whole tens number comes between 1258 and 1263?
9. Write three numbers between 1944 and 1954.
10. Write three numbers between 1068 and 1078.
11. Write two whole tens numbers between 1116 and 1141.
12. Write two whole tens numbers between 1447 and 1472.

### Challenge

Fill this pattern with your choice of numbers from the 1001 to 1100 grid, e.g.



Use a calculator to add the four 'outer' numbers, then divide the total by the middle number, e.g.  $(1036 + 1047 + 1056 + 1045) \div 1046$ .

Write the answer. Repeat for a different set of numbers. What do you notice? Can you explain what is happening?

# Making 4-digit numbers

## Sheet 1

Write each of these numbers as a place value addition,

e.g.  $3462 = 3000 + 400 + 60 + 2$

1. 5623

2. 3971

3. 2928

4. 3737

5. 2662

6. 2045

7. 4920

8. 3506

9. 3030

10. 4029

### Challenge

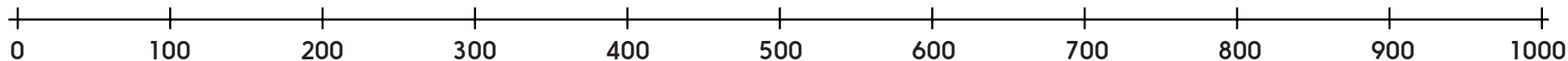
Roll a dice 4 times to generate four digits.

Use these four digits to create as many different 4-digit numbers as you can, then order them from smallest to largest.

# 3-digit numbers

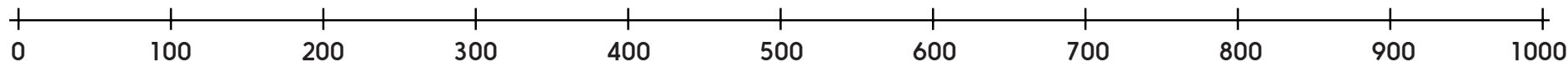
## Sheet 1

Mark the following numbers on your number line and write three numbers that come between them in the space provided.



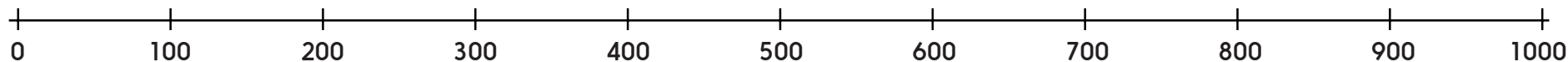
670 and 710

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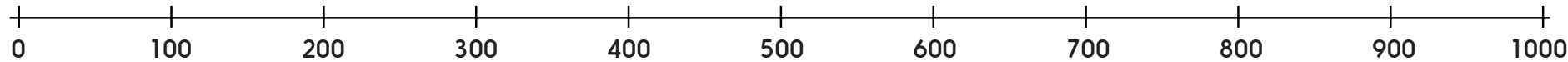
460 and 520

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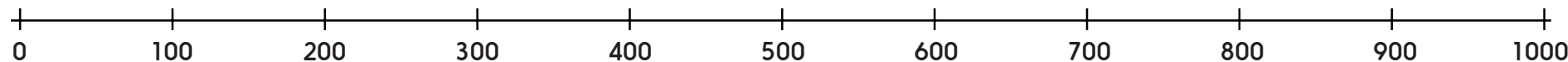
180 and 750

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810 and 930

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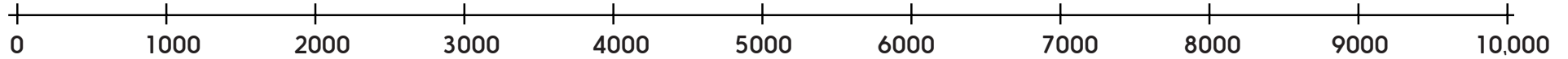
240 and 390

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# 4-digit numbers

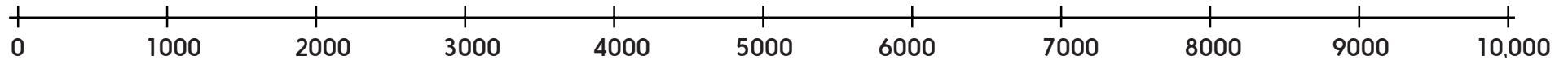
## Sheet 2

Mark the following pairs of numbers on your number line and write three numbers that come between them in the space provided.



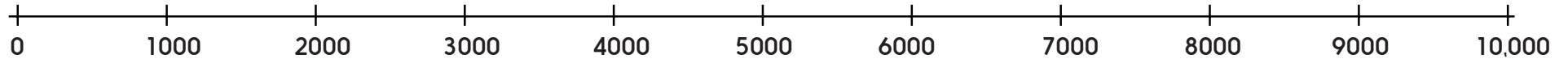
2670 and 3010

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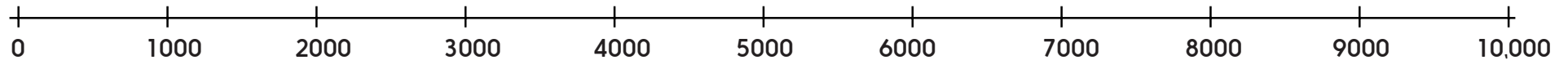
4360 and 5320

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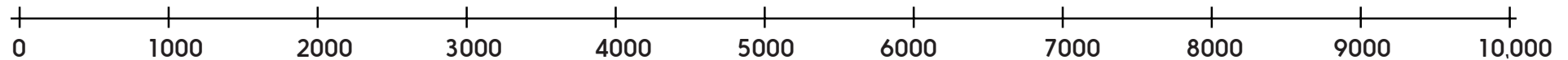
1980 and 2750

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8810 and 9130

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6540 and 7290

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### Challenge

Using the digits 4, 7, 2 and 3, how many different numbers can you find between 4000 and 8000?

# Place value

## Answers

### Day 1 Mystery numbers Sheet 1

1. What number comes after 1053? **1054**
2. What number comes after 1029? **1030**
3. What number comes before 1080? **1079**
4. What number comes before 1011? **1010**
5. What number comes between 1032 and 1034? **1033**
6. What number comes between 1089 and 1091? **1090**
7. What number is 30 less than 1072? **1042**
8. What number is 42 more than 1049? **1091**

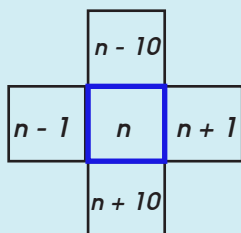
### Day 1 Mystery numbers Sheet 2

1. What number comes after 1053? **1054**
2. What number comes after 1229? **1030**
3. What number comes ten after 1583? **1593**
4. What number comes before 1480? **1479**
5. What number comes before 1019? **1018**
6. What number comes ten before 1101? **1091**
7. What number comes between 1332 and 1334? **1333**
8. What whole tens number comes between 1258 and 1263? **1260**
9. Write three numbers between 1944 and 1954. **e.g. 1945, 1946, 1950**
10. Write three numbers between 1068 and 1078. **e.g. 1069, 1071, 1077**
11. Write two whole tens numbers between 1116 and 1141. **e.g. 1120, 1130, 1040**
12. Write two whole tens numbers between 1447 and 1472. **e.g. 1450, 1460, 1470**

### Challenge

e.g.  $(1036 + 1047 + 1056 + 1045) \div 1046 = 4$   
or  $(1002 + 1022 + 1011 + 1013) \div 1012 = 4$ , etc.

The answer is always 4 because the total of the 4 numbers around the middle number always has the same relationship with the middle number:



So, the total of the 'outer' numbers is:

$$n + n + n + n + 10 - 10 + 1 - 1$$

$$= 4n$$

Dividing  $4n$  by the middle number ( $n$ ) will always give 4 as the answer!

# Place value

## Answers

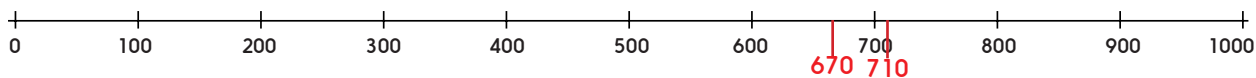
### Day 2 Making 4-digit numbers Sheet 1

1.  $5623 = 5000 + 600 + 20 + 3$
2.  $3971 = 3000 + 900 + 70 + 1$
3.  $2928 = 2000 + 900 + 20 + 8$
4.  $3737 = 3000 + 700 + 30 + 7$
5.  $2662 = 2000 + 600 + 60 + 2$
6.  $2045 = 2000 + 40 + 5$
7.  $4920 = 4000 + 900 + 20$
8.  $3506 = 3000 + 500 + 6$
9.  $3030 = 3000 + 30$
10.  $4029 = 4000 + 20 + 9$

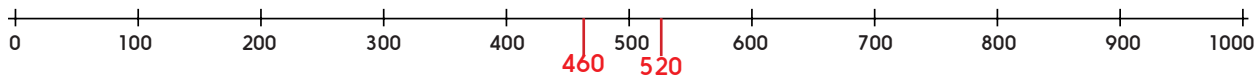
### Challenge

If four different digits are rolled there will be 24 possible numbers to create!

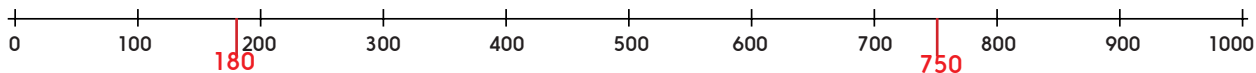
### Day 3 3-digit numbers Sheet 1



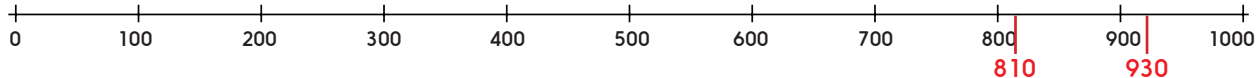
Accept any three numbers from 671 up to 709, e.g. 680, 690, 700.



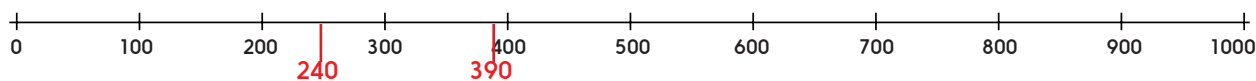
Accept any three numbers from 461 up to 519, e.g. 470, 480, 490.



Accept any three numbers from 181 up to 749, e.g. 190, 400, 720.



Accept any three numbers from 811 up to 929, e.g. 820, 910, 920.



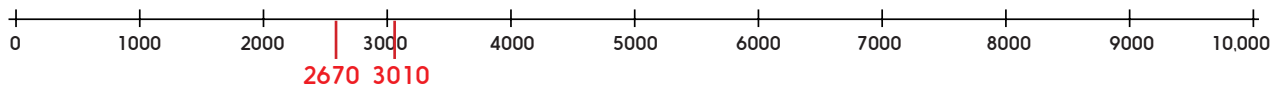
Accept any three numbers from 241 up to 389, e.g. 250, 270, 340.



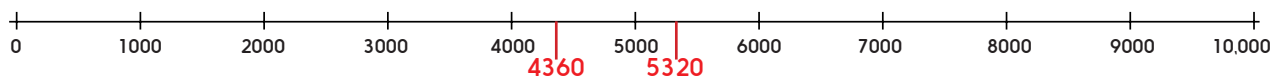
# Place value

## Answers

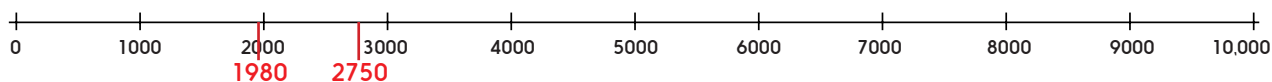
### Day 3 4-digit numbers Sheet 2



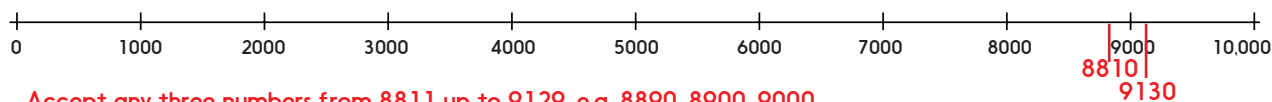
Accept any three numbers from 2669 up to 3009, e.g. 2680, 2800, 3000.



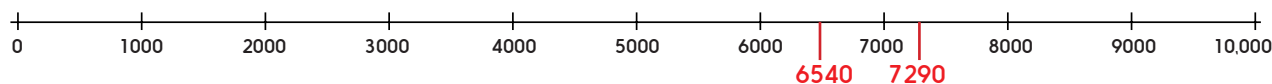
Accept any three numbers from 4361 up to 5319, e.g. 4400, 4800, 5300.



Accept any three numbers from 1981 up to 2749, e.g. 2000, 2100, 2600.



Accept any three numbers from 8811 up to 9129, e.g. 8890, 8900, 9000.



Accept any three numbers from 6541 up to 7289, e.g. 6550, 7200, 7250.

### Challenge

Using the digits 4, 7, 2 and 3, how many different numbers can you find between 4000 and 8000?

12 numbers, 4723, 4732, 4237, 4273, 4372, 4327, 7423, 7432, 7243, 7234, 7342, 7324.