

Place-value investigation and review: make the biggest and smallest number

BIGGEST AND SMALLEST FROM 3, 7, 0, 5

- Sort the digits largest to smallest: **7, 5, 3, 0**.
- Biggest number: put **7** in Th, then **5, 3, 0** → **7,530**.
- Smallest four-digit number: put smallest non-zero digit **3** in Th, then **0, 5, 7** → **3,057**.

Th	H	T	U
7	5	3	0
3	0	5	7

WARM-UP

Write one digit per cell on the place-value mat to build each number.

Th	H	T	U

- Using the cards 4, 9, 1, 6, write the biggest number in the top row.
- Using the cards 3, 6, 0, 8, write the smallest number in the second row, keeping the 0 out of the thousands.
- Using the cards 2, 7, 5, 9, write the biggest number in the third row.

PRACTICE

- At games club Aoife draws the four cards **2**, **8**, **1** and **6**. What is the biggest four-digit number she can make?
- Now Aoife tries for the lowest score with the cards **1**, **4**, **0** and **8**. Remember the **0** cannot go in front. What is the smallest four-digit number she can make?
- In the next round Cian holds the cards **3**, **5**, **7** and **2**. He plays for the highest score, so what is the biggest number he can make?
- For the deciding game Niamh lays out the cards **2**, **5**, **8** and **0**. She must write both the biggest and the smallest four-digit numbers she can make. What are they?

? ALWAYS, SOMETIMES, NEVER

Always, sometimes or never true? Write A, S or N.

- Putting the largest digit in the thousands column gives the biggest number you can make from the cards.
- A 0 can be placed in the thousands column of the smallest four-digit number.
- The biggest number from a set of cards is larger than the smallest number from the same cards.
- The smallest digit goes in the thousands column of the smallest number.

REFLECT

What rule did you use to build the biggest number from a set of digits?