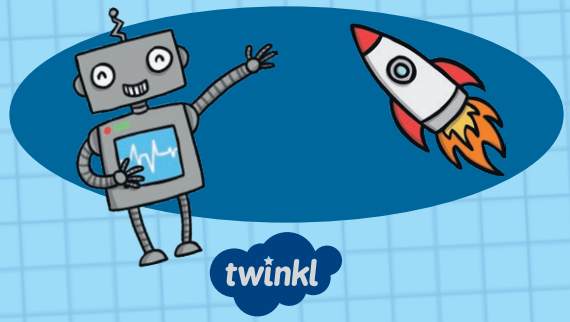
Maths Mastery

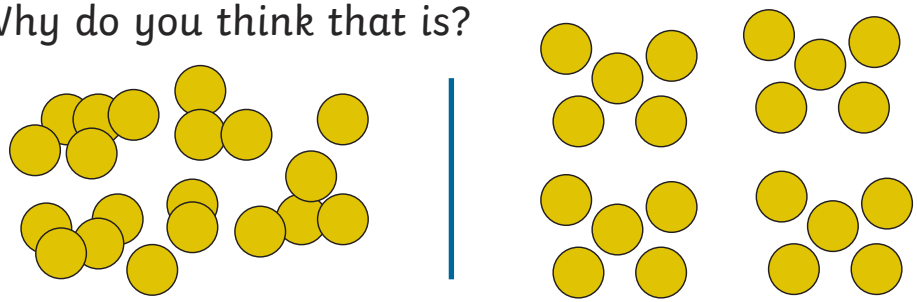
Different Representations Place Value Challenge Cards



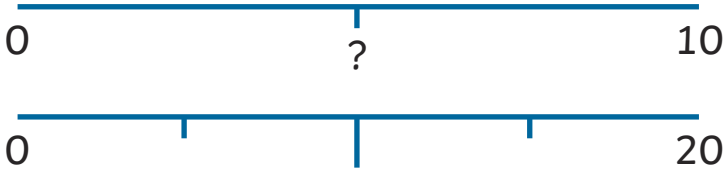
1. Asif has arranged the same counters in different ways. Estimate how many counters you think he has.

Which group of counters was easier to estimate?

Why do you think that is?



2. Ben puts the **same** number on each of the number lines.

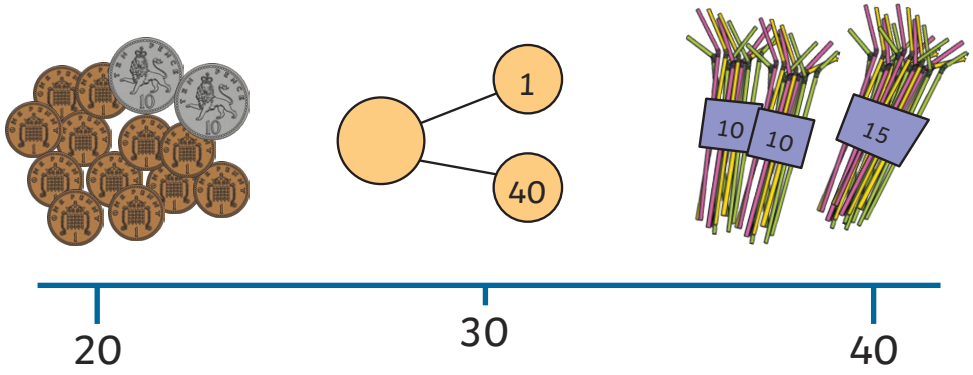


What is Ben's number?

Where would he place it on the bottom line?

Can you explain how you know?

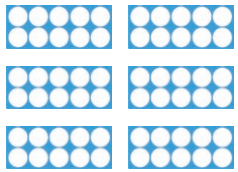
3. Tomek has made some numbers. Can you estimate where they would go on the number line?

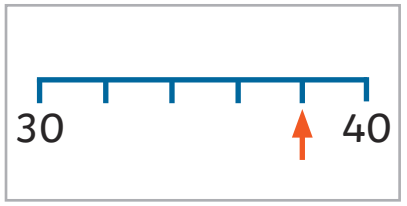


4. Anna says she has exactly 60p. Ben says she is wrong. He says he can tell without even counting the money.

How do you think Ben knows?

5. Ben, Anna and Eric have each thought of a number. Use the representations and clues to find out their numbers.



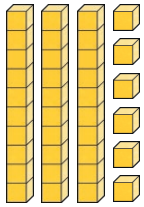


Ben's number falls between the other two numbers.

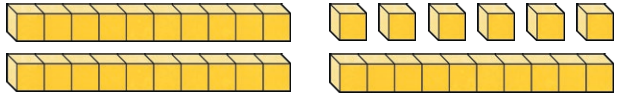
Anna's number is closer to Ben's than Eric's.

What clue could you say about Eric's number?

6. Hari has 36 in tens and ones. He is partitioning his number in different ways.



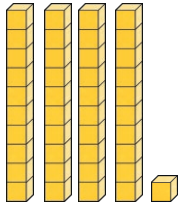
"I have made 36 into 20 and 16."



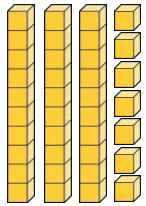
Can you find 2 more ways to partition his number?

How many ways can you find?

7. Ben has 41 in tens and ones.



Hari has 37.



Hari says he can partition his number in more ways than Ben.

Do you agree? Explain your answer.

Roll a dice 3 times.

Use the digits to make 3-digit numbers.

How many different numbers can you make?

Choose one of your numbers. How many different ways can you find to represent it?

Closest to 50.

Roll a dice twice and arrange the digits to make a 2-digit number.

Get your friend to do the same thing.

Look on a number line to find out who is closer to 50.

The person who is closer wins a point.

8. Placing pairs of numbers at each end of the number line, what number would go where the '?' is?

Try: 0 and 40, 0 and 100, 20 and 40.

Can you think of other numbers to try?

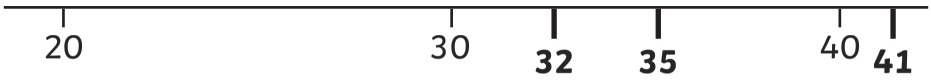
Year 2 Different Representations Place Value Maths Mastery **Answers**

1. Which group of counters was easier to estimate? Why do you think that is?
   Children may find the counters that are grouped in 5s easier to estimate as they can see the groups and can estimate by knowing the number of groups.

2. What is Ben's number?
   5

   Where would he place it on the bottom line? Can you explain how you know?
   Because 5 is $\frac{1}{4}$ of 20, it would be a quarter of the way along the number line.

3. Tomek has made some numbers. Can you estimate where they would go on the number line?



4. Anna says she has exactly 60p. Ben says she is wrong. He says he can tell without even counting the money. How do you think Ben knows?
   Ben can see from the 1ps that there are not enough to make 10, so Anna's number is not a multiple of 10.

5. Some children have represented a number. Can you follow the clues to find which representation belongs to each of them?

   "My number falls in between the other 2."
   number line

   "My number is closer to Ben's than than Eric's.
   money

   Eric could say his number is the greatest or that it is a multiple of ten, amongst other possibilities.

6. Can you find 2 more ways to partition his number?
   Example answers: 30 and 6, 10 and 26

   How many ways can you find?
   There are multiple solutions.

7. Hari says he can partition his number in more ways than Ben. Do you agree? How many ways can you find?
   Hari has more pieces of equipment, so can partition in more ways. However, if they replace the ten sticks with ones, there will be more possibilities for Ben's number.

8. Placing pairs of numbers at each end of the number line, what number would go where the '?' is?
   0 and 40 = 30 **0 and 100 = 75** **20 and 40 = 35**