

Odds and evens

Children use number shapes to find totals of odd and even numbers, to see if they can find any rules.

Skills practised:

- Recognising odd and even numbers
- Adding single-digit numbers

Conjecture: *If you add two even numbers you get an even answer. If you add two odd numbers you get an odd answer. (NB This conjecture is wrong, but the children may enjoy proving it to be so!)*

What to do:

Children work individually or in pairs.

Children will need a set of 1 to 10 number shapes, e.g. Numicon™.

1. Remind children that even numbers end in 0, 2, 4, 6 or 8 and odd numbers end in 1, 3, 5, 7 or 9.
2. Ask children to find two even numbers amongst their number shapes. They put them together to form a rectangle if they can. Is their answer odd or even?



3. Repeat with other pairs of even numbers. What happens?
4. Now ask children to add two odd numbers, again trying to get them to form a rectangle. Is their answer odd or even?



5. Repeat with other pairs of odd numbers.
6. Finally, they find an odd number and an even number, and add these together. What happens this time?



7. Repeat with another pair, one odd and one even. What do children notice about the answers?

Can children write a rule for each combination?

For example:

even + even =

odd + odd =

even + odd =

CHALLENGE: What happens if children add three even numbers? Three odd numbers? Two odd and one even? Two evens and one odd?

Aim:

- To begin to find and test a rule

Minimum number of calculations expected

10

Odds and evens

Even numbers end in 0, 2, 4, 6 or 8

Odd numbers end in 1, 3, 5, 7 or 9

1. Find two even numbers amongst your number shapes. If you can, put them together to form a rectangle. Is your answer odd or even?



2. Try again with other pairs of even numbers. What happens?
3. Find two odd numbers amongst your number shapes. Try to form a rectangle. Is your answer odd or even?



4. Repeat with other pairs of odd numbers.
5. Finally, find an odd number and an even number, and add these together. What happens this time?



6. Repeat with another pair, one odd and one even. What do you notice about the answers?

Can you write a rule for each combination?
For example:

even + even =
odd + odd =
even + odd =

Challenge

What happens if you add three even numbers?
Three odd numbers?
Two odd and one even?
Two evens and one odd?