

## More Divisibility Rules

### Purpose:

The purpose of this activity is to help your child extend the divisibility rules they know.

### Link to the Number Framework:

Number Facts, Stage 8

### What you need:

Pack of cards. Ace = 1, remove the 10 and the picture cards.

Divisibility Rules. You can print these or make your own.

Calculator

### What to do:

Together make a 3 digit number using the cards.

Use the divisibility rules to work out what numbers the hundreds is divisible by. You can check your answers with the calculator.

### What to expect your child to do:

Over time expect your child to become quicker at using the divisibility rules .

### Variation:

Ask your child to make a 3 digit number that is divisible by a number, for example “make a number that can be divisible by 3”

### He Kupu Māori:

riwhiriwhi (~a)	shuffle
whakawehe (~a)	divide
mati	digit
tau mati-toru	3-digit number
taurua	even number
tapeke	total

### He Whakawhitinga Kōrero:

- Riwhiriwhia ngā kāri. Whakaputua, ko ngā mata ki raro. (*Shuffle the cards. Pile them face down.*)
- Tangohia kia toru ngā kāri. (*Take 3 cards.*)
- Mā tāua ēnei kāri e whakamahi hei hanga i tētahi tau mati-toru. (*Let's use these cards to make a 3-digit number.*)
- He aha ngā tau mati-tahi ka taea te whakawehe ki roto i tēnei tau mati-toru? (*What are the 1-digit numbers that we can divide into this number?*)
- Ka taea te whakawehe ki te rua, nā te mea he taurua te mati whakamutunga. (*You can divide it by 2 because the last digit is an even number.*)
- Ka taea te whakawehe ki te toru, nā te mea ka taea te tapeke o ōna mati te whakawehe ki te toru. (*You can divide it by 3 because you can divide the sum of its digits by 3.*)
- Ka taea te whakawehe ki te rima, nā te mea he kore, he rima rānei te mati whakamutunga. (*You can divide it by 5 because the last digit is a zero or 5.*)
- Ka taea te whakawehe ki te iwa nā te mea ka taea te tapeke o ōna mati te whakawehe ki te iwa. (*You can divide it by 9 because you can divide the sum of its digits by 9.*)
- Ka taea te whakawehe ki te tekau, nā te mea he kore te mati whakamutunga. (*You can divide it by 10 because the last digit is a zero.*)

- Ka taea te whakawehe ki te whā, nā te mea ka taea te tau ka hangaia ki ngā mati whakamutunga e rua te whakawehe ki te whā. *(You can divide it by 4 because you can divide the number made by the last two digits by 4.)*
- Ka taea te whakawehe ki te ono, nā te mea ka taea te whakawehe ki te rua me te toru. *(You can divide it by 6 because you can divide it by both 2 and 3.)*
- Ka taea te whakawehe ki te waru, nā te mea ka taea te whakawehe ngā mati whakamutunga e toru ki te waru. *(You can divide it by 8 because you can divide each of the last 3 digits by 8.)*

**Download a file of this activity:**

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A number is...

divisible by 2 if the last digit is an even number.

divisible by 3 if the sum of the digits is divisible by 3.

divisible by 5 if the last digit is either 0 or 5.

divisible by 9 if the sum of the digits is divisible by 9.

divisible by 10 if the last digit is 0.

divisible by 4 if the last 2 digits are divisible by 4.

divisible by 6 if it is divisible by both 2 and 3.

divisible by 8 if the last 3 digits are divisible by 8. The last 3 digits of the number are divisible by 8 if it is divisible by 2, then 2, then 2.

### Just for interest

A number is divisible by 7 if you can take the last digit double it, then subtract it from the rest of the digits. If this number is a multiple of 7 then the original number is divisible by 7. For example, 378, take 8, double it to get 16, 37 take away 16 is 21. 21 is multiple of 7 so 378 is divisible by 7.