Mathematics

# Inverse Proportion 

## Downloadable resource

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## Try this

It takes 24 minutes for Antoni to tidy Miss Jones' classroom on his own.
It takes 12 minutes for Antoni and Binh to tidy the classroom.
It takes 8 minutes for Antoni, Binh and Zaki to tidy the classroom.


How long do you think it will take for Antoni, Binh, Zaki and Yasmin to tidy the classroom?

## Independent task

1) Decide whether the scenarios below represent direct or inverse proportion:

|  | Direct | Inverse |
| :--- | :--- | :--- |
| The cost of apples and the quantity of apples. |  |  |
| The speed travelled and the time taken. |  |  |
| The time it takes to build a house compared with the <br> number of builders all working at the same rate. |  |  |
| The circumference of a circle and its diameter. |  |  |

2) The Beta construction company is building an extension. Three builders take 15 days to complete a project.
a) How many days would it take one builder?
b) How long would the project take to complete if there were six builders?

## Explore

Direct or inverse proportion?

| $x$ | 3 | 5 | 6 | 13 |
| :---: | :---: | :---: | :---: | :---: |
| $y$ | 9 | 15 | 18 | 39 |
| $x y$ |  |  |  |  |
| $y / x$ |  |  |  |  |


| $x$ | 2 | 3 | 5 | 6 |
| :---: | :---: | :---: | :---: | :---: |
| $y$ | 30 | 20 | 12 | 10 |
| $x y$ |  |  |  |  |
| $y / x$ |  |  |  |  |


| $x$ | 1 | 10 | 100 | 1000 |
| :---: | :---: | :---: | :---: | :---: |
| $y$ | 5 | 0.5 | 0.05 | 0.005 |
| $x y$ |  |  |  |  |
| $y / x$ |  |  |  |  |

