## Direct Proportion 1

## Downloadable Resource

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## Try this

Antoni goes to the fair.

He can choose to pay $£ 2.00$ for each ride.
OR

He can pay $£ 5$ for a wristband and each ride costs $£ 1$.

I want to go on 7 rides.
Which way will cost the least amount of money?

## Independent task

1) Fill in the missing values in the tables below.

What is the connection between the two variables in each table?

| Number of mugs | 4 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Cost | 1.60 | 2.80 | 3.60 | 4.00 |
| Cost $\div$ number of <br> mugs | 0.40 | 0.40 | 0.40 | 0.40 |


| Number of pens | 3 |  |  | 13 |
| :---: | :---: | :---: | :---: | :---: |
| Cost | 5.40 | 12.60 | 19.80 | 23.40 |
| Cost $\div$ number of <br> pens | 1.80 | 1.80 | 1.80 |  |


| Hours worked |  | 17 |  | 31 |
| :---: | :---: | :---: | :---: | :---: |
| Cost | 150 | 212.50 | 237.50 |  |
| Cost $\div$ number of pens | 12.50 |  | 12.50 | 12.50 |

## Independent task

2) The charge for Anna's phone bill is directly proportional to the number of megabytes of data used. When Anna uses 8 Mb , she pays 24 pence.
a) How much will Anna pay if she uses 39 Mb ?
b) John has the same phone contract.

He gets a bill for $£ 21$. How much data did he use?

## Explore

| Number of rides <br> (n) | 1 | 2 | 3 |
| :---: | :---: | :---: | :---: |
| Cost (C) | 4 | 8 | 12 |


| Cost (C) | 1 | 2 | 3 |
| :---: | :---: | :---: | :---: |
| Number of rides <br> (n) | 9 | 13 | 17 |

Work out the rule which connects the number of rides to the Cost.
Describe what is the same and what is different.
If you drew these on a graph, what would be the same and what would be different?

