Mathematics

Direct proportion (1)
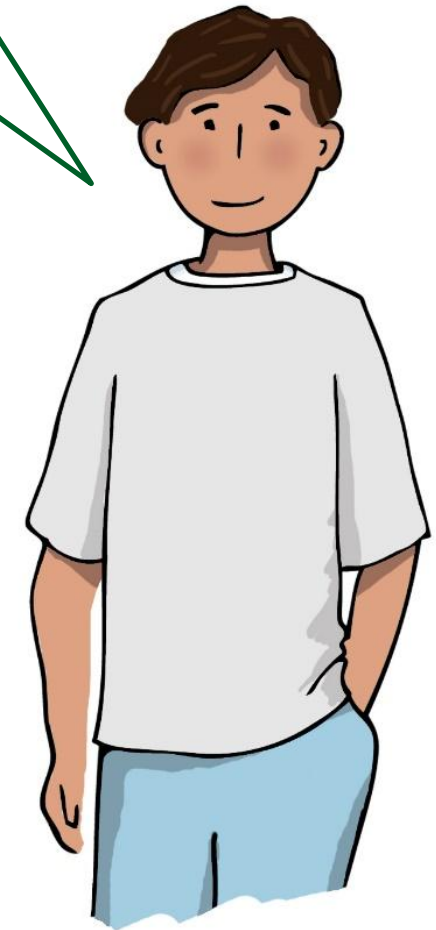
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Try this

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 ÷ number of mugs	0.40	0.40	0.40	0.40

Number of pens	3			13
Cost	5.40	12.60	19.80	23.40
Cost ÷ number of pens	1.80	1.80	1.80	

Hours worked		17		31
Cost	150	212.50	237.50	
Cost ÷ 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 8Mb, she pays 24 pence.

a) How much will Anna pay if she uses 39Mb?

b) John has the same phone contract.
He gets a bill for £21. How much data did he use?

Explore

Number of rides (n)	1	2	3
Cost (C)	4	8	12

Cost (C)	1	2	3
Number of rides (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?