

Order of operations KS3 Maths

- Dad** One adult, four youngsters please.
- Assistant** Certainly Sir, that'll be...
- Dad** Don't tell me... £27!
- Sophie** Dad, can you buy us all milkshakes and popcorn too?
- Dad** Oh Ok Sophie. Here's a £20 note. Ati, Harriet, Ben; come on, we'll all go in and get a seat.
- Sophie** But Dad, what about your change?
- Dad** There won't be any change Sophie.
- Assistant** OK four milk-shakes, four popcorns, that's £20 exactly please.
- Sophie** How did Dad know it would cost £20 exactly? If only Mathsmutt was here, he'd know. Mathsmutt?
- Mathsmutt** Ta-da! I am here, Sophie... and it is all to do with the order of operations. That means the order in which you do stuff.
- Let's break it down!
- There's one adult with a £7 ticket, and four of you with a £5 ticket. Let's work out the cost of you and your friends first. What's 5 times 4?
- Sophie** Easy. It's 20.
- Mathsmutt** Now we just add the 7.
- Sophie** £27 - Just like Dad said!
- Mathsmutt** Yep. We always work out the multiplications first. Unless there's brackets. Brackets help us make things even easier. We can put the milkshakes and popcorn in brackets.

So it's £2, plus £3, for each of you.

Sophie

A-ha. So once dad knew our snacks cost £5, he just multiplied that by 4. 5 times 4 is £20.

Mathsmutt

Correctamundo! Remember - brackets are very helpful, that's why we do them first. They grab all the important stuff for us and they squash it all together. Think of the 'Order of Operations' like a movie trilogy. It's important to get the order right.

Part 1: Brackets first.

Then part 2: Multiplication or division.

And finally part 3: Addition or subtraction.

See, Sophie, you don't need to be a wizard to work out the order of operations!

Sophie

True Mathsmutt, but it looks like you'll need a spell to remove that bin lid... Bin lidous offus!

Audience

Shhhh!