

Finding ten percent - answers

Look through this menu:

All starters £3.00
All main courses £5.00
All puddings £2.00
10% service charge added to all bills.

Work out what the 10% service charge will be for the following meals.

To work out these service charges remember that 10% is $\frac{1}{10}$ of something.
So to find 10% divide by 10.

1. A starter and a main course:
Cost of meal is £3 + £5 = £8
10% of £8.00 = $\frac{1}{10}$ of £8.00 = £8.00 ÷ 10 = 80p
2. A main and a pudding:
Cost of meal is £5 + £2 = £7
10% of £7.00 = $\frac{1}{10}$ of £7.00 = £7.00 ÷ 10 = 70p
3. A starter, a main and a pudding:
Cost of meal is £3 + £5 + £2 = £10
10% of £10.00 = $\frac{1}{10}$ of £10.00 = £10.00 ÷ 10 = £1

Now work out the bills for these meals and then work out the 10% service charge.

4. Two people both having starters and main course. Cost of meal is two starters + two mains:
= 2 × £3 + 2 × £5
= £6 + £10
= £16
10% service charge = £16 ÷ 10 = £1.60

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5. Five people all having starters, main and pudding:
Each person has starter, main and pudding, which costs $\pounds 3 + \pounds 5 + \pounds 2 = \pounds 10$.
There are five people so total cost is $5 \times \pounds 10 = \pounds 50$
10% service charge = $\pounds 50 \div 10 = \pounds 5.00$
6. Three people all having main and pudding:
Main and pudding costs $\pounds 5 + \pounds 2 = \pounds 7$
There are three people so total cost is $3 \times \pounds 7 = \pounds 21$
10% service charge = $\pounds 21 \div 10 = \pounds 2.10$
7. Four people. Two have starter, main and pudding. Two have just main and pudding:
Starter, main and pudding is $\pounds 3 + \pounds 5 + \pounds 2 = \pounds 10$
Main and pudding is $\pounds 5 + \pounds 2 = \pounds 7$
So total cost is $2 \times \pounds 10 + 2 \times \pounds 7 = \pounds 20 + \pounds 14 = \pounds 34$
10% service charge = $\pounds 34 \div 10 = \pounds 3.40$
8. Five people. They share 3 starters, all have a main course each and there are two puddings:
Three starters is $3 \times \pounds 3 = \pounds 9$
Five mains is $5 \times \pounds 5 = \pounds 25$
Two puddings is $2 \times \pounds 2 = \pounds 4$
Total cost of meal is $\pounds 9 + \pounds 25 + \pounds 4 = \pounds 38$
10% service charge = $\pounds 38 \div 10 = \pounds 3.80$
9. Ten people. Starters and main for everyone and six puddings:
Cost is $10 \times \pounds 3 + 10 \times \pounds 5 + 6 \times \pounds 2$
 $= \pounds 30 + \pounds 50 + \pounds 12 = \pounds 92$
10% service charge = $\pounds 92 \div 10 = \pounds 9.20$
10. Six people. Three starters, five have main course and all have pudding:
Three starters is $3 \times \pounds 3 = \pounds 9$
Five mains is $5 \times \pounds 5 = \pounds 25$
All have pudding so that's six puddings, which is $6 \times \pounds 2 = \pounds 12$
Total cost is $\pounds 9 + \pounds 25 + \pounds 12 = \pounds 46$
10% service charge = $\pounds 46 \div 10 = \pounds 4.60$