



## Article

# Christmas calculations

Davies, Janice Anne

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## Christmas Calculations with answers

The ability to perform calculations is an essential skill of prescribers, but it is also important for many other areas of life, especially during the festive season! Use your transferrable skills to work out the following Christmassy calculations:

You are cooking turkey for Christmas dinner. The following information is essential in order to calculate what size to buy, how long to defrost and cooking times:

What size turkey to buy <https://www.bbcgoodfood.com/howto/guide/foolproof-turkey-guide>

- 2-2.5kg serves 4-6
- 3kg serves 6-7
- 3.5kg serves 7-8
- 4-4.5kg serves 8-10
- 5-5.5kg serves 10-12
- 6-6.5kg serves 12-15

Defrosting times <https://www.nhs.uk/Livewell/Healthychristmas/Pages/cooking-turkey.aspx>

To work out the defrosting time for your turkey, first check the packaging for any guidance. If there aren't any defrosting instructions, use the following times to work out roughly how long it will take to thaw your turkey:

- In a fridge at 4C (39F), allow 10 to 12 hours per kilogram. Be aware that not all fridges will be set to this temperature.
- In a cool room (below 17.5C/64F), allow around 3 to 4 hours per kilogram, or longer if the room is particularly cold.
- At room temperature (about 20C/68F), allow approximately 2 hours per kilogram.

Cooking times <https://www.nhs.uk/Livewell/Healthychristmas/Pages/cooking-turkey.aspx>

As a general guide, in an oven preheated to 180C (350F, gas mark 4):

- allow 45 minutes per kilogram, plus 20 minutes, for a turkey under 4.5kg
- allow 40 minutes per kilogram for a turkey that's between 4.5kg and 6.5kg
- allow 35 minutes per kilogram for a turkey of more than 6.5kg

Question 1 Nine people will be eating Christmas dinner. What size turkey will you need to buy?

4-4.5kg

*Editor – please add a picture here to separate the questions 1 and 2*

You choose a 4.3kg frozen turkey.

Question 2 Auntie Elaine is interested to know what the weight of the turkey is in pounds (lb).

1kg = 2.2lb

How much does the turkey weigh in pounds and ounces?

9.46 pounds (lb)

Question 3 How long (in hours and minutes) will you need to defrost the turkey for

- a) In a fridge **Between 43 hours and 51 hours 36 minutes**
- b) In a cool room **Between 12 hours 54 minutes and 17 hours 12 minutes**
- c) At room temperature **8 hours 36 minutes**

Question 4 How long will you need to cook the turkey for? (Round your answer up to 1 decimal place and provide the answer in hours and minutes)

3 hours 36 minutes

Question 5 Adults spend on average £244 each on gifts.

<http://www.independent.co.uk/news/business/news/uk-shopping-christmas-forecast-british-consumers-brexit-a8031606.html>

If you buy each of your 8 dinner guests a gift, what is the average amount you will spend on each (assume you buy no other gifts for other people).

£30.50

Question 6 For your sister Maria you buy a magazine subscription costing £30 for one year. How much does Maria's magazine cost each month?

£2.50

Question 7 You spend £33 on perfume for cousin Clare. If this is in a sale after Christmas, how much will it cost if the price is reduced by 20%?

£26.40

Alcohol by volume (ABV) is a measure of the amount of alcohol contained in a given volume of alcoholic drink. For example, a beverage with 8% ABV contains 8 units of alcohol in each Litre of the drink.

Question 8 Your niece Katrina likes to drink vodka based drinks. The ABV of her favourite vodka is 40%. If she wants to drink a maximum of 2 units this evening, what is the maximum amount of vodka she should pour into her glass?

50ml

Question 9 Uncle Des prefers wine. How many units of alcohol are contained within a 250ml glass of 12% ABV wine?

3 units