

# Home Learning - Thursday 30<sup>th</sup> April

Reading CPG reading 10 mins/10mins check through.

Maths Maths No Prob' - Algebra Lesson 9 Using Formulae - Workbook pages. 57-58

## Using Formulae

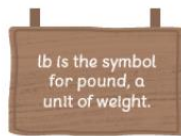
### Lesson 9

#### In Focus

👧 has this formula for the cooking time of stuffed turkey lighter than 16 lbs.

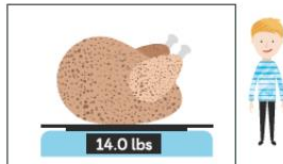
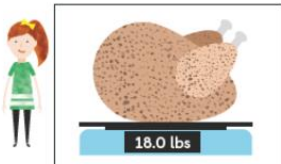
$$t = 90 + 15w$$

where  $t$  is the cooking time (in minutes) for a turkey of weight  $w$  (in lbs).



For turkeys over 16 lbs, the formula is:

$$t = 330 + 7.5(w - 16)$$



For a dinner party starting at 7 p.m., what is the latest time 👧 and 👦 should start roasting their stuffed turkey?

#### Let's Learn

1 👦 has a turkey lighter than 16 lbs.

$$t = 90 + 15w$$

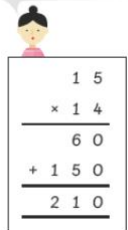


$$\begin{aligned} w = 14, t &= 90 + 15 \times 14 \\ &= 90 + 210 \\ &= 300 \end{aligned}$$

$$300 \text{ min} = \text{ } \text{ h } \text{ } \text{ min}$$

👦 should start at  at the latest.

15w means multiply 15 by w, where w lbs is the weight of the turkey.



2 👧 has a turkey heavier than 16 lbs.

$$t = 330 + 7.5(w - 16)$$



$$\begin{aligned} w = 18, t &= 330 + 7.5(18 - 16) \\ &= 330 + 7.5(2) \\ &= 330 + 15 \\ &= 345 \end{aligned}$$

$$345 \text{ min} = \text{ } \text{ h } \text{ } \text{ min}$$

👧 should start at  at the latest.

w - 16 means subtract 16 from w, where w lbs is the weight of the turkey.



#### Guided Practice

The length of the longer side of a rectangle is  $m$  cm. The longer side of the rectangle is 1.5 cm greater than the shorter side. The formula to calculate the perimeter  $p$  cm is then:

$$p = 4m - 3$$

- Calculate  $p$  when  $m = 5$ .
- Calculate  $p$  when the longer side is 10 cm.
- Calculate the lengths of the sides of the rectangle if the perimeter is:
  - 31 cm
  - 30 cm

Does this formula work for all rectangles?



**English 1hr** – Today you have a grammar test (see attachment) - This will keep you busy. Either print off or record the answers in your book. You have an hour for this, but it is important to check your answers after! I would check the answers tomorrow. I will give you half an hour tomorrow to do this.

**Project 30 mins** – OK, so when governments are elected, they usually pick areas to focus on. Look at your areas generated the last few days and chose one that you think is really important. You now need to write a list of reasons or a short speech saying why you think it is important and why people should vote for you as a result. Below is a YouTube click on a man talking about the importance of the NHS at a party conference.

[https://www.youtube.com/watch?v=H8q\\_ASrnlQE](https://www.youtube.com/watch?v=H8q_ASrnlQE)

## Maths Answers

### Let's Learn

- 1  has a turkey lighter than 16 lbs.

$$t = 90 + 15w$$




$$\begin{aligned} w = 14, t &= 90 + 15 \times 14 \\ &= 90 + 210 \\ &= 300 \end{aligned}$$

$$300 \text{ min} = 5 \text{ h } 0 \text{ min}$$

 should start at **2 pm** at the latest.

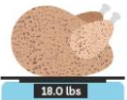
15w means multiply 15 by w, where w lbs is the weight of the turkey.



$$\begin{array}{r} 15 \\ \times 14 \\ \hline 60 \\ + 150 \\ \hline 210 \end{array}$$

- 2  has a turkey heavier than 16 lbs.

$$t = 330 + 7.5(w - 16)$$



$$\begin{aligned} w = 18, t &= 330 + 7.5(18 - 16) \\ &= 330 + 7.5(2) \\ &= 330 + 15 \\ &= 345 \end{aligned}$$

$$345 \text{ min} = 5 \text{ h } 45 \text{ min}$$

 should start at **1:15 pm** at the latest.

w - 16 means subtract 16 from w, where w lbs is the weight of the turkey.



### Guided Practice

The length of the longer side of a rectangle is  $m$  cm. The longer side of the rectangle is 1.5 cm greater than the shorter side. The formula to calculate the perimeter  $p$  cm is then:

$$p = 4m - 3$$

- (a) Calculate  $p$  when  $m = 5$ . **17 cm**  
 (b) Calculate  $p$  when the longer side is 10 cm. **37 cm**  
 (c) Calculate the lengths of the sides of the rectangle if the perimeter is:  
 (i) 31 cm **8.5 cm**  
 (ii) 30 cm **8.25 cm**

Does this formula work for all rectangles?



### Worksheet 9

#### Using Formulae

- 1 The length of the longer side of a rectangle is  $x$  cm, which is 5 cm greater than the length of its shorter side. Its perimeter  $p$  cm is given by:

$$p = 4x - 10$$

- (a) Find  $p$  when  $x = 15$ .

**50 cm**

- (b) Find  $p$  when  $x = 28$ .

**102 cm**

- (c) Find the length of the rectangle if the perimeter is 46 cm.

**14 cm**

- (d) Find the length of the rectangle if the perimeter is 95 cm.

**26.25 cm**

- 2 Use the formula  $A = 72 + \frac{t}{2}$  to calculate the value of  $A$ :

- (a) when  $t = 12$

**A = 78**

- (b) when  $t = 38$

**A = 91**

- (c) when  $t = 75$

**A = 109.5**

- (d) when  $t = 18.7$

**A = 81.35**