

**Numbers – 2022 Nov IGCSE 0444 Math**

1. **Nov/2022/Paper\_23/No.1**

Marco starts work at 20 45 and finishes at 02 08 the next day.

Find the length of time, in hours and minutes, he works.

..... h ..... min [1]

2. **Nov/2022/Paper\_23/No.2**

117      121      149      164      215

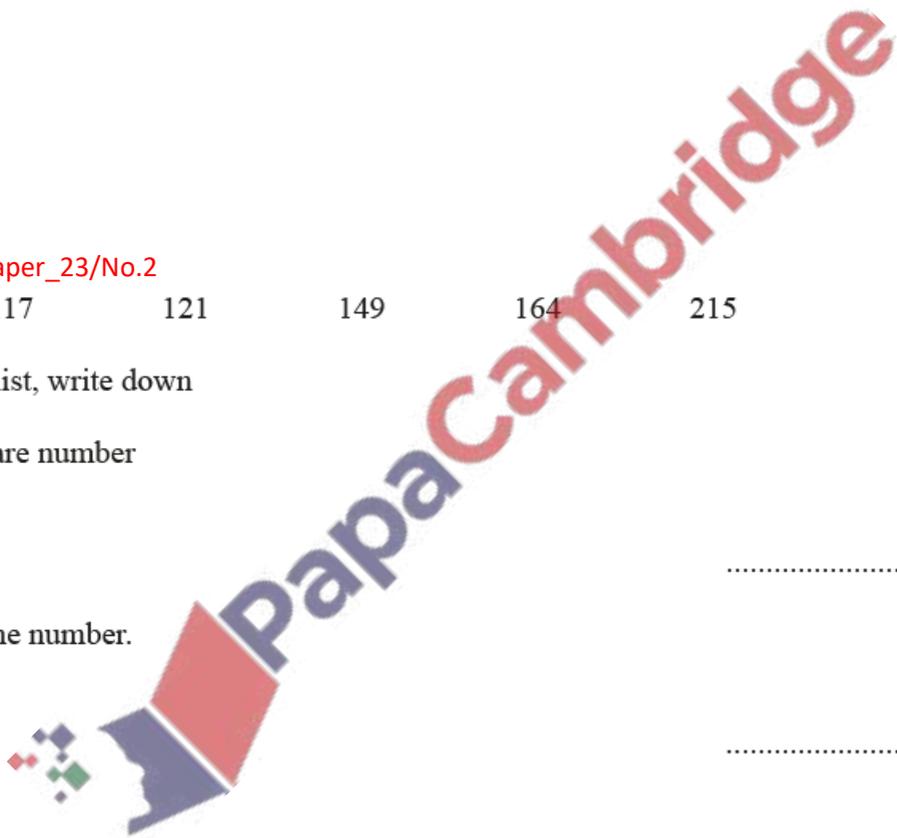
From this list, write down

(a) a square number

..... [1]

(b) a prime number.

..... [1]



3. **Nov/2022/Paper\_23/No.3**

Work out.

$$\sqrt{0.000\,009}$$

..... [1]

4. Nov/2022/Paper\_23/No.5

Work out  $\frac{5}{7} - \frac{2}{3}$ .

Give your answer as a fraction in its simplest form.

..... [2]

5. Nov/2022/Paper\_23/No.7

Find the least common multiple (LCM) of 36 and 60.

..... [2]

6. Nov/2022/Paper\_23/No.12

Keita invests \$4000 at a rate of 5% per year compound interest.

Work out the interest earned on the investment at the end of 2 years.

\$ ..... [3]

7. Nov/2022/Paper\_23/No.13  
Simplify  $\sqrt{75} + \sqrt{363}$ .

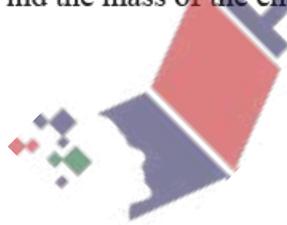
..... [2]

8. Nov/2022/Paper\_43/No.2

(a) Here are the ingredients needed to make a pasta bake to serve 12 people.

250 g butter
600 g pasta
460 g mushrooms
280 g cheese
800 ml milk

(i) Find the mass of the cheese as a percentage of the mass of the mushrooms.



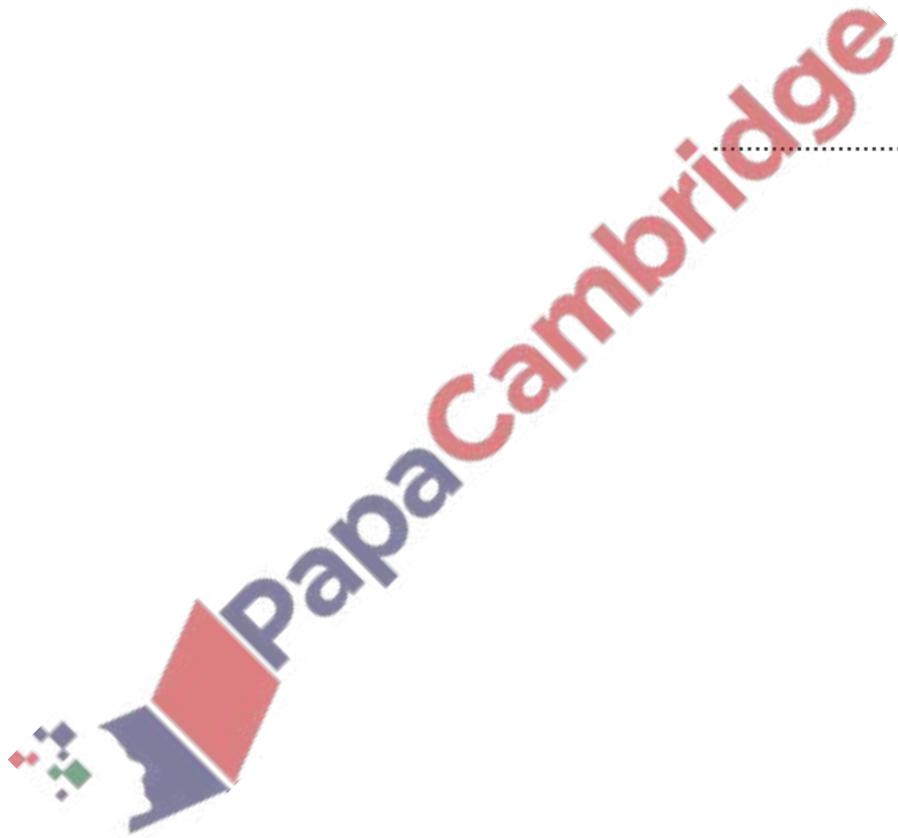
.....% [1]

(ii) Find the mass of butter needed to make a pasta bake to serve 18 people.

..... g [2]

(ii) Monica has 2.2 liters of milk and 1.5 kg of each other ingredient.

Calculate the greatest number of people she can serve with pasta bake.



..... [3]

- (b) In 2019, a packet of pasta cost \$2.40.  
This was an increase of 25% of the cost of a packet in 2018.

(i) Work out the cost in 2018.

\$ ..... [2]

(ii) In 2020, the cost of a packet increased by 15% from the cost in 2019.

Work out the total percentage increase in the cost of a packet from 2018 to 2020.

.....% [3]

- (c) The pasta bake for 12 people uses 250 g of butter, 460 g of mushrooms and 280 g of cheese.  
A new type of pasta bake is made using the same amounts of butter and mushrooms but the amount of cheese is increased by  $x$  grams.  
The new ratio butter : mushrooms : cheese = 50 : 92 : 59.

Find the value of  $x$ .

$x =$  ..... [2]

