



1.

- (a) Abdullah and Jasmine bought a car for \$9000.
Abdullah paid 45% of the \$9000 and Jasmine paid the rest.

(i) How much did Jasmine pay towards the cost of the car?

Answer(a)(i) \$ [2]

(ii) Write down the ratio of the payments Abdullah : Jasmine in its simplest form.

Answer(a)(ii) : [1]

- (b) Last year it cost \$2256 to run the car.
Abdullah, Jasmine and their son Henri share this cost in the ratio 8 : 3 : 1.
Calculate the amount each paid to run the car.

Answer(b) Abdullah \$

Jasmine \$

Henri \$ [3]

2.

- (a) John wants to estimate the value of π .
He measures the circumference of a circular pizza as 105 cm and its diameter as 34 cm, both correct to the nearest centimetre.

Calculate the lower bound of his estimate of the value of π .
Give your answer correct to 3 decimal places.

Answer (a) [4]



- (b) The volume of a cylindrical can is 550 cm^3 , correct to the nearest 10 cm^3 .
The height of the can is 12 cm correct to the nearest centimetre.

Calculate the upper bound of the radius of the can.
Give your answer correct to 3 decimal places.

Answer (b) cm [5]

3.

Use your calculator to find $\sqrt{\frac{45 \times 5.75}{3.1 + 1.5}}$.

Answer [2]

4.

The mass of a carbon atom is $2 \times 10^{-27} \text{ g}$.

How many carbon atoms are there in 6 g of carbon?

Answer [2]

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Class: IGCSE IX
Subject: Mathematics
5.



Topic: Numbers
Time: 90 Min

Write the following in order of size, **largest** first.

$\sin 158^\circ$ $\cos 158^\circ$ $\cos 38^\circ$ $\sin 38^\circ$

Answer > > > [2]

6.

Express $0.\dot{1}2\dot{3}$ as a fraction in its simplest form.

Answer [3]

7.

Use your calculator to find the value of 1.35^7 .

Give your answer correct to 5 significant figures.

Answer [2]

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Class: IGCSE IX
Subject: Mathematics
8.



Topic: Numbers
Time: 90 Min

Write the following in order of size, smallest first.

π 3.14 $\frac{22}{7}$ 3.142 3

Answer < < < [2]
smallest

9.

Without using a calculator, work out $\frac{1}{4} + \frac{1}{6}$.

Write down all the steps in your working and give your answer as a fraction in its simplest form.

Answer [2]

10.

Write 15.0782 correct to

(a) one decimal place,

Answer(a) [1]

(b) the nearest 10.

Answer(b) [1]

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Class: IGCSE IX
Subject: Mathematics
11.



Topic: Numbers
Time: 90 Min

On a ship, the price of a gift is 24 euros (€) or \$30.

What is the difference in the price on a day when the exchange rate is €1 = \$1.2378?
Give your answer in dollars, correct to the nearest cent.

Answer \$..... [3]

12.

(a) Write 2.8×10^2 as an ordinary number.

Answer(a) [1]

(b) Work out $2.5 \times 10^8 \times 2 \times 10^{-2}$.
Give your answer in standard form.

Answer(b) [2]

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Class: IGCSE IX
Subject: Mathematics
13.



Topic: Numbers
Time: 90 Min

(a) Simplify $x^8 \div x^2$.

Answer(a) [1]

(b) Simplify $\left(\frac{x^6}{27}\right)^{\frac{1}{3}}$.

Answer(b) [2]

14.

Insert **one pair** of brackets only to make the following statement correct.

$$6 + 5 \times 10 - 8 = 16 \quad [1]$$

15.

Calculate $\frac{8.24 + 2.56}{1.26 - 0.72}$.

Answer [1]

16.

The length, l metres, of a football pitch is 96 m, correct to the nearest metre.

Complete the statement about the length of this football pitch.

Answer $\leq l <$ [2]

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Class: IGCSE IX
Subject: Mathematics
17.



Topic: Numbers
Time: 90 Min

For her holiday, Alyssa changed 2800 Malaysian Ringgits (MYR) to US dollars (\$) when the exchange rate was 1 MYR = \$0.325 .

At the end of her holiday she had \$210 left.

(a) How many dollars did she spend?

Answer(a) \$..... [2]

(b) She changed the \$210 for 750 MYR.

What was the exchange rate in dollars for 1 MYR?

Answer(b) 1 MYR = \$..... [1]

18.

Without using a calculator, work out $1\frac{1}{6} \div \frac{7}{8}$.

Show all your working and give your answer as a fraction in its lowest terms.

Answer [3]

19.

A train takes 65 minutes to travel 52 km.

Calculate the average speed of the train in kilometres per hour.

Answer km/h [2]



(a) A company makes compost by mixing loam, sand and coir in the following ratio.

$$\text{loam : sand : coir} = 7 : 2 : 3$$

(i) How much loam is there in a 72 litre bag of the compost?

Answer(a)(i) litres [2]

(ii) In a small bag of the compost there are 13.5 litres of coir.

How much compost is in a small bag?

Answer(a)(ii) litres [2]

21.

Simplify.

(i) $x^3 \div \frac{3}{x^5}$

Answer(a)(i) [1]

(ii) $5xy^8 \times 3x^6y^{-5}$

Answer(a)(ii) [2]

(iii) $(64x^{12})^{\frac{2}{3}}$

Answer(a)(iii) [2]

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Class: IGCSE IX
Subject: Mathematics
22.



Topic: Numbers
Time: 90 Min

Ellie drives a car at a constant speed of 30 m/s correct to the nearest 5 m/s.
She maintains this speed for 5 minutes correct to the nearest 10 seconds.

Calculate the upper bound of the distance in **kilometres** that Ellie could have travelled.

Answer(c) km [5]

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