Find the missing number to complete this statement.

_____ is 10,000 more than 553,739.

1

563,739

Which of these numbers is **closest** to 9000?

9999 8000 8099 8999 9002

2

8999

What is the value of the underlined digit?

9,6<u>7</u>4,001

3

70,000

Which of these is the year **1925** in Roman numerals?

MCMXXXV MCMXXVIII MCMXXV

4

MCMXXV

Round **385,853** to the nearest **100,000**, **10,000** and **1000**.

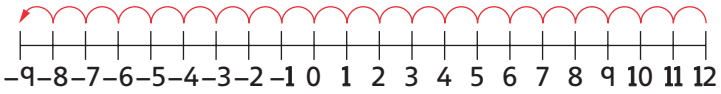
5

400,000, 390,000 and 386,000

The temperature at lunchtime was **12°C**. By midnight it had fallen to **–9°C**. By how much did the temperature drop?

6

21°C



A 4-digit number is made up of **two different even** digits and **two different odd** digits. What is the **greatest** possible number that it can be?

7

9876

Deepak buys a second-hand car costing **£2660**. He pays a deposit of **£500** and then pays the rest in **12 equal** monthly instalments. How much does he pay each month?

8

£180 a month

£2660 – £500 = £2160, £2160 ÷ 12 = £180

Az completes this subtraction calculation.

162 – 43 = 119

What **addition** calculation could he use to check his answer?

9

119 + 43 = 162 (or 43 + 119 = 162)

There are **210** people on a train. **14** people get off at the first station, **37** people get on at the second station and **55** people get off at the third station. How many people are left on the train?

10

178 people

210 – 14 + 37 – 55 = 178

Which **four factors** of 30 are **not** also factors of 40?

11

3, 6, 15, 30

Factors of 30 are 1, 2, 3, 5, 6, 10, 15, 30 and factors of 40 are 1, 2, 4, 5, 8, 10, 20, 40.

Find all the **common multiples** of 6 and 8 that are less than 70.

12

24, 48

Multiples of 6 are 6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66 and multiples of 8 are 8, 16, 24, 32, 40, 48, 56, 64.

Find the next **prime number** after 31.

13

37

What is $2^2 + 3^3$?

14

31

$2 \times 2 = 4$, $3 \times 3 \times 3 = 27$, $4 + 27 = 31$

What are the next **two** numbers in this sequence?

1, 8, 27, _____, _____

15

64, 125 (they are cube numbers)

A bakery makes **4940** cakes one day and **6375** cakes the next day. It sells **8467** cakes to a large supermarket chain. How many cakes does it have left to sell?

16

2848 cakes

4940 + 6375 = 11,315, 11,315 – 8467 = 2848

Calculate 0.162 × 1000

17

162

800 football fans are travelling to a match on coaches. Each coach can hold **12** passengers. How many coaches will be needed altogether?

18

67 coaches

800 ÷ 12 = 66 r 8

A printing company prints **1440** books. It packages them into boxes which hold **12** books. How many boxes will be needed altogether?

19

120 boxes

1440 ÷ 12 = 120

A group of friends share **40** chocolates equally between them. They each get **8** chocolates. How many friends are in the group?

20

5 friends

40 ÷ 8 = 5

$300 + 400 \times 2 - 10 =$ _____

21

1090

$400 \times 2 = 800$, $300 + 800 - 10 = 1090$

What is $4\frac{3}{6}$ written as an **improper fraction**?

22

$\frac{27}{6}$

Write $\frac{24}{18}$ in its **simplest form**.

23

$\frac{4}{3}$

$\frac{24}{18} = \frac{12}{9} = \frac{4}{3}$

Write the missing values to make these **equivalent fractions** correct.

$\frac{3}{8} = \frac{\quad}{32} = \frac{6}{\quad}$

24

$\frac{3}{8} = \frac{12}{32} = \frac{6}{16}$

Which of these fractions is the **largest**?

$\frac{5}{8}$ $\frac{14}{16}$ $\frac{9}{8}$ $\frac{12}{32}$

25

$\frac{9}{8}$

Convert the fractions into equivalents:

$\frac{5}{8}, \frac{7}{8}, \frac{9}{8}, \frac{3}{8}$. $\frac{9}{8}$ is the largest.

Rosie read $\frac{1}{6}$ of her book on Tuesday, $\frac{1}{3}$ of her book on Wednesday and the rest of her book on Thursday. What fraction of her book did she read on Thursday?

26

$\frac{3}{6}$ (or $\frac{1}{2}$) of her book

$\frac{1}{6} + \frac{1}{3} = \frac{1}{6} + \frac{2}{6} = \frac{3}{6}$, $1 - \frac{3}{6} = \frac{3}{6}$

Calculate $\frac{1}{2} \times \frac{1}{3}$

27

$\frac{1}{6}$

Calculate $\frac{1}{6} \div 3$

28

$\frac{1}{18}$

What is $\frac{1}{5}$ written as decimal?

29

0.2

Round 6.45 to the nearest whole number.

30

6

Which of these numbers is **closest** to 1?

0.9 1.100 0.999 1.1 0.99

31

0.999

What is the value of the underlined digit?

0.3$\underline{7}$4

32

$\frac{7}{100}$ (or 7 hundredths or 0.07)

What is 11% of 3500?

33

385

10% of 3500 = 350, 1% of 3500 = 35,
350 + 35 = 385.

Marta spent $\frac{2}{5}$ of a PE lesson playing football. For the rest of the lesson, she played tennis. What **percentage** of the lesson did she spend playing tennis?

34

60%

$1 - \frac{2}{5} = \frac{3}{5}$, $\frac{3}{5} = \frac{6}{10} = 60\%$.

Give $\frac{4}{5}$ as a decimal and as a percentage.

35

0.8 and 80%

Finn uses **250ml** of milk to make **two** strawberry milkshakes. How much milk would he need to make **three** strawberry milkshakes?

36

375ml

250 ÷ 2 = 125, 125 × 3 = 375

Logan and Abi share **56** sweets in the ratio **3:5**. How many sweets do they each have?

37

Logan has 21 sweets and Abi has 35 sweets.

3 + 5 = 8, 56 ÷ 8 = 7,
3 × 7 = 21, 5 × 7 = 35

In a primary school with **420** pupils, **15%** of the pupils are boys. How many of the pupils are girls?

38

357 are girls

10% of 420 = 42, 5% of 420 = 21,
42 + 21 = 63, 420 – 63 = 357

The diameter of a circle is **2.5cm**. What is the diameter when the circle is enlarged by a scale factor of **10**?

39

25cm

2.5 × 10 = 25

Arlo and Lee have **30** grapes altogether. Arlo has **half** as many grapes as Lee. How many grapes does Lee have?

40

20 grapes

Arlo and Lee's grapes are in the ratio 1:2.
1 + 2 = 3, 30 ÷ 3 = 10,
1 × 10 = 10, 2 × 10 = 20

If $3a - 16 = 44$, what is the value of a?

41

$a = 20$

$44 + 16 = 60$, $60 \div 3 = 20$

If $b = 31$, what is $4b - 8$?

42

116

$4 \times 31 = 124$, $124 - 8 = 116$

The rule for this sequence is 'subtract 8 and add 4 each time'. What are the missing numbers?

87, _____ , _____ , 75, 71

43

83 and 79

a and b are **two different** numbers **less than 10**. Give two possible numbers that a and b could be.

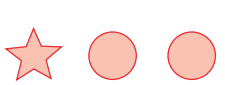
$2a - b = 9$

44

$a = 5, b = 1$
$a = 6, b = 3$
$a = 7, b = 5$ or
$a = 8, b = 7$

Each shape stands for a number.
Work out the **value** of each shape.

 = 84

 = 40

45

 = 28

 = 6

Three friends took part in a race. Jamal finished in **100 minutes**, Amy finished in **2.5 hours** and Jo finished in $\frac{1}{12}$ **of a day**. Who finished last?

46

Amy

Jamal took 100 minutes, Amy took 150 minutes and Jo took 120 minutes

Mel walks **530** metres from her house to the supermarket. How far does she walk in kilometres?

47

0.53km

530 ÷ 1000 = 0.53

Sarah lives **5** miles away from her school. Approximately how far is this in kilometres?

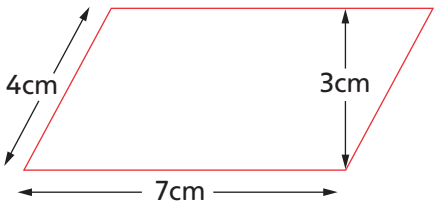
1 mile is approximately 1.6km.

48

8km

5 × 1.6 = 8

What is the **area** of this shape?

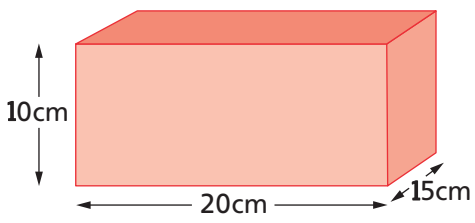


49

21cm²

area of parallelogram = base × height

What is the **volume** of this cuboid?



50

3000cm³

volume of cuboid = length × width × height

Anita's rabbit eats **50g** of rabbit food each day. If rabbit food is sold in bags of **2.5kg**, how many days will one bag last for?

51

50 days

2500 ÷ 50 = 50

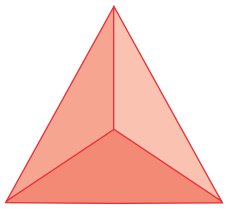
4 pens weigh **92.8g**. 1 pen and 3 pencils weigh **78.7g**. How much does 1 pencil weigh?

52

18.5g

92.8 ÷ 4 = 23.2, 78.7 – 23.2 = 55.5,
55.5 ÷ 3 = 18.5

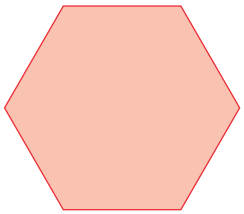
How many **edges**, **faces** and **vertices** does this 3D shape have?



53

6 edges, 4 faces, 4 vertices

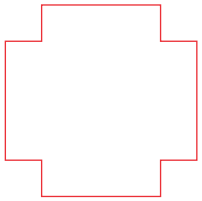
Explain why this shape is a **regular** shape.



54

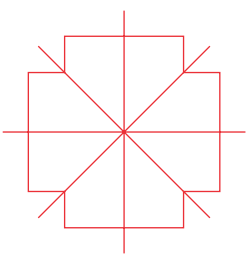
All its sides are the same length and all its angles are equal.

How many **lines of symmetry** are there on this shape?

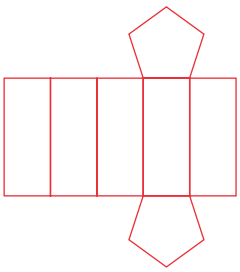


55

4



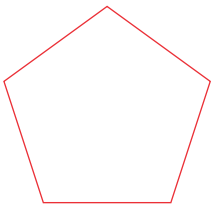
What shape is made from this net?



56

A pentagonal prism

Calculate the size of the angles inside this **regular** shape.



57

108°

The angles inside a pentagon always add up to 540°, 540 ÷ 5 = 108°.

Which **two** of these angles are **not** obtuse angles?

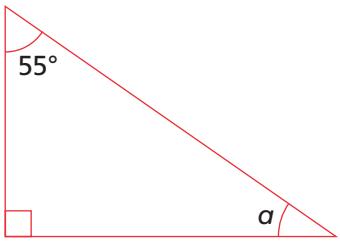
80° 100° 140° 200° 130°

58

80° and 200°

An obtuse angle is more than 90° and less than 180°.

What is the size of angle *a*?

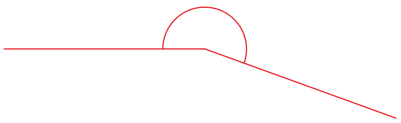


59

35°

180° – 90° – 55° = 35°

Which of these is the most sensible estimate of this angle?



80° 160° 200° 320° 360°

60

200°

If the **diameter** of a circle is **13cm**, what is its **radius**?

61

6.5cm

13cm ÷ 2 = 6.5cm

Use **<**, **>** or **=** to complete this statement.

circumference _____ radius _____ diameter

62

circumference > radius < diameter

A theme park records the number of visitors over a weekend. How many **more** people visited on Sunday than on Saturday?

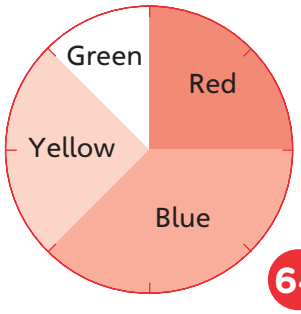
Day	Men	Women	Children
Saturday	563	674	836
Sunday	748	958	1002

63

635 more people

563 + 674 + 836 = 2073, 748 + 958 + 1002 = 2708, 2708 – 2073 = 635

The pie chart shows the favourite colours of 40 children. What **percentage** of the children prefer red?



64

25%

Leo buys three chocolate bars costing 42p, 55p and 29p. What is the **mean** price of the chocolate bars?

65

42p

42p + 55p + 29p = 126p, 126p ÷ 3 = 42p