Tuesday 18.01.22

MPI adding and subtracting decimals

Spicy

5.87 + 3.123 =

63.82 + 217.7 =

9 − 3.45 =

125.48 − 72.3 =

Two decimal numbers add together to equal 1

One of the numbers is 0.007

What is the other number?

Here are three bags in a shop

A £11.50 B £14.65 C £16.50

How much does bag B cost to the nearest pound?

£

Jamie buys bag A and bag C.

How much change does he get from £40?

327 + 515 = 842

Use the calculation above to complete the following equations.

+ 51.5 = 84.2

8,420 − = 3,270

85,200 − 52,500 =

Tuesday 18.01.22

Extra Spicy

MPI adding and subtracting decimals.

37.8 − 14.671 =

9—3.768

2.7 + 3.014 =

15.98 + 26.314 =

In the chart any **three** numbers in a line, **across or down,** have a **total of 18.45**

Write the **missing** number.

2.46	8.61	7.38
11.07		1.23
4.92	3.69	9.84

Show your method

Here are three supermarket bills.

Tom rounds each bill **to the nearest £10** and then adds them up.

What is the total amount that Tom gets?

£

Mary adds up the three bills **exactly**.

What is the total difference between her total and Tom's total?

Show your method

Tuesday 18.01.22

Extra Spicy

BONUS CHALLENGE

How can you make seven even?

Crack the code to answer the question.

Match each of the decimal numbers given in words (in the first column) to the correct number given in digits (in the second column).

*Note: there are extra answers given in the second column that you will not need.

Once you have matched the numbers correctly, put the corresponding letter into the code breaking table at the bottom of the page to answer the riddle above.

1) Three tenths add two hundredths 2) One tenth add two tenths 3) Fifteen hundredths add eighteen hundredths 4) Four hundredths add three tenths	A 0.3 D 0.31 E 0.32 K 0.33 T 0.34 S 0.37
5) Two tenths add four tenths 6) Three hundredths add five tenths 7) Twenty one hundredths add twenty nine hundredths 8) Five tenths add seven hundredths	A 0.5 E 0.53 H 0.54 N 0.56 T 0.57 Y 0.6
9) Four tenths add five tenths 10) Nine hundredths add nine tenths 11) Forty one hundredths add fourty two hundredths 12) Five hundredths more than nine tenths	A 0.83 E 0.89 H 0.9 L 0.92 S 0.95 W 0.99

Answer

4	2	3	1	11	10	7	5	8	9	6	12

Tuesday 18.01.22

Extra Spicy

BONUS CHALLENGE

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Answer

4	2	3	1	11	10	7	5	8	9	6	12

Wednesday 19.01.22

Decimal Place Value Riddles

1)
What is the number?

- the number has 2 digits
- the number is less than 10
- the tenths digit is 1 more than the ones digit
- the digits add up to 7

2)
What is the number?

- the number has 2 digits
- the number is more than 5
- the ones digit is more than double the tenths digit
- the digits add up to 11
- the ones digit is even

3)
What is the number?

- the number has 3 digits
- the number is less than 30
- the tenths digit is equal to the sum of the tens and ones digits
- the number has odd and even digits
- the number is greater than 20
- the ones digit is half of 10

4)
What is the number?

- the number has 3 digits
- the number is greater than 70
- the sum of the tens and ones digits is 10
- none of the digits are greater than 7
- the tenths digit is one less than the tens digit

5)
What is the number?

- the number has 3 digits
- the number is less than 10
- one of the digits is a 0
- the sum of all the digits is 9
- add 0.98 to the number to get a whole number

6)
What is the number?

- the number has 3 digits
- the number is less than 5
- the ones digit is half of the tenths digit
- one of the digits is a 1
- two of the digits are even
- the number is greater than 3

7)
What is the number?

- the number has 4 digits
- the number is less than 100
- one of the digits is an odd number
- the hundredths digit is the sum of the tens and ones digits
- the tens digit is three times the ones digit
- the tens digit is two times the tenths digit

8)
What is the number?

- the number has 4 digits
- the number is less than 20
- the only even digit is in the hundredths place
- the tenths digit is 2 more than the ones digit
- the tens digit is a quarter of the hundredths digit
- the tenths digit is nine times the tens digit

Thursday 20.01.22

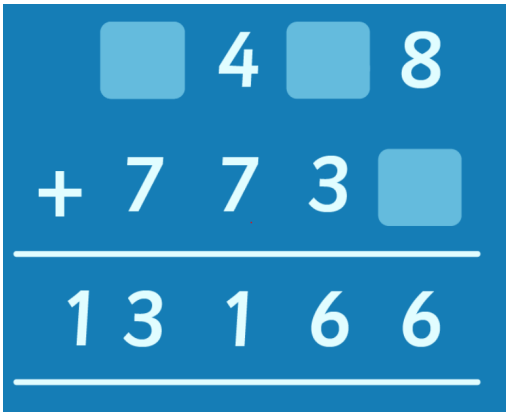
Spicy

MPI solving problems with all four operations

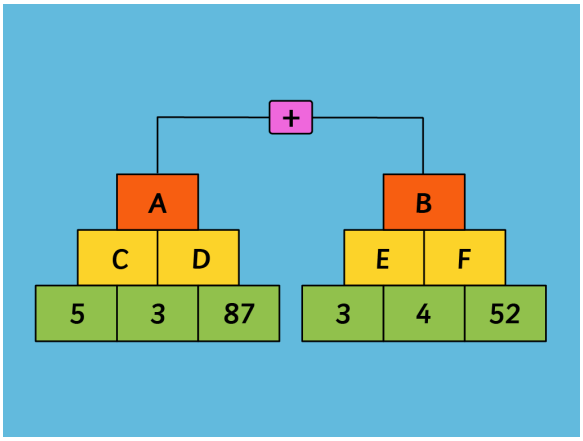
If each table in the lunch hall seats eight people, how many tables are needed for 230 people?

What is the missing number?

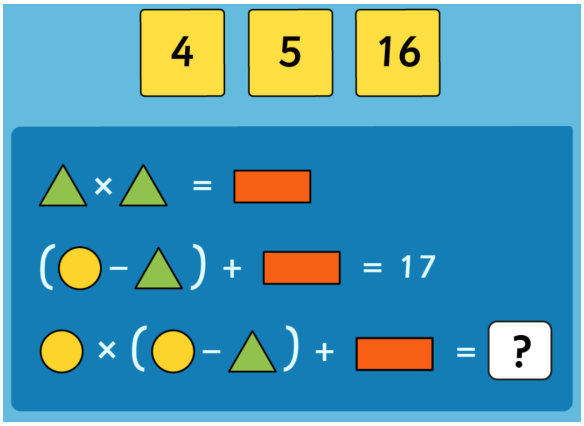
18 × ___ = 4,266



In the pyramids, the number in each box is the product of the numbers in the two boxes below it. What is the sum of the numbers in box A and box B?



The numbers 4, 5 and 16 are represented with different shapes. Find the value of each shape, then find the answer to the last calculation.



Katie pays £19.00 for five items. Use the following clues to find the **cost of the magazine**:

- The eggs and the oranges cost £7.00 in total.
- The oranges and the juice cost £6.00 in total.
- The crisps and the magazine cost £8.00 in total.
- The crisps cost three times more than the oranges.

A school raises £6,016 for charity in the first year, and £4,800 in the second year. The school splits the total amount of money raised equally between five charities. Each charity receives £_____.

Amount of money raised by a school

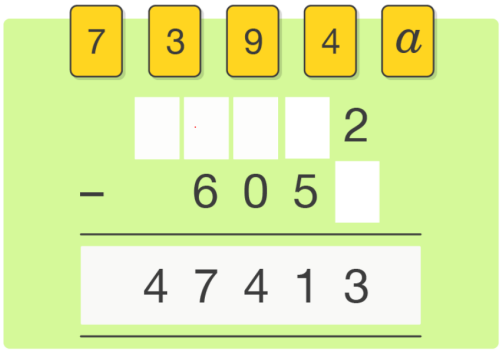
year	amount raised (£)
1	6,016
2	4,800

Thursday 20.01.22

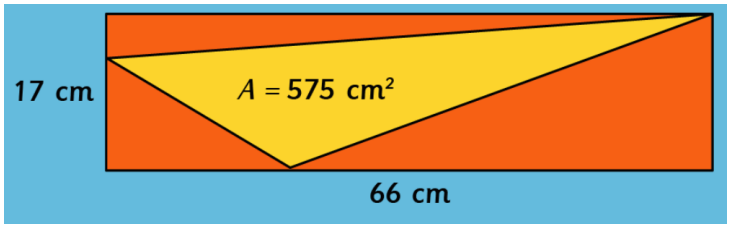
Extra Spicy

MPI solving problems with all four operations

The five number cards are used to complete the column subtraction. What is the value of *a*?



It takes Carol 1 minute to swim one length of a swimming pool. If the length of the swimming pool is 48 m, how long does it take her to swim 1 m in seconds?



The area of the triangle is 575 square centimetres (cm²). In square centimetres (cm²), what is the area of the rectangle that isn't covered by the triangle?

A builder has a budget of £100,000 to build a house. The table shows the materials he has bought so far and the cost per item. Calculate how much money he has remaining in his budget.

material	cost per item	quantity
bags of cement	£5	2,321
pallet of bricks	£7	5,302
box of tiles	£4	1,905

Mr Jackson has been charged the wrong amount for his mobile phone bill. He was charged £39.21. He should pay a fixed charge of £4.20 per month, plus 12 pence per text and 4 pence per minute for

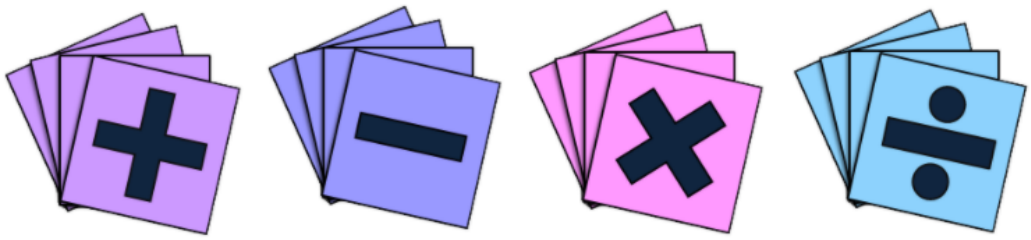
Thursday 20.01.22

Extra Spicy

BONUS CHALLENGE

How many ways can you find to put operation signs (+, −, ×, ÷) between the digits make 100?

1 2 3 4 5 6 7 8 9 = 100



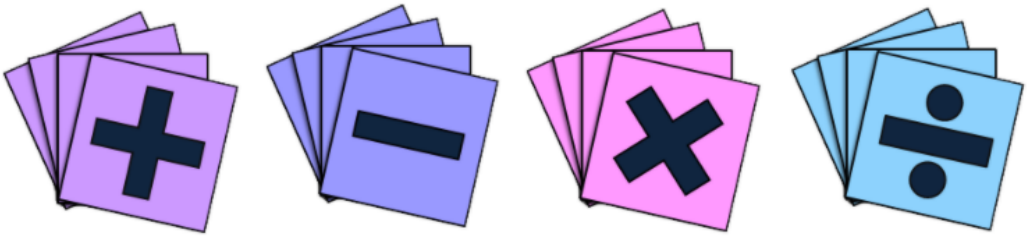
Thursday 20.01.22

Extra Spicy

BONUS CHALLENGE

How many ways can you find to put operation signs (+, −, ×, ÷) between the digits make 100?

1 2 3 4 5 6 7 8 9 = 100



Friday 21.01.22

Spicy

MPI solving multi-step problems

Maria bakes cakes and sells them in bags.

She uses this formula to work out how much to charge for one bag of cakes.

Cost = number of cakes × 20p + 15p for the bag

How much will a bag of 12 cakes cost?

£

Olivia buys a bag of cakes for £5.15

Use the formula to calculate how many cakes are in the bag.

Cut and stick these problems into your books, and underneath show your working out.

These are the prices of cheese in a shop.

Cheddar cheese
82p for 100 grams

Edam cheese
66p for 100 grams

Cottage cheese
45p for 100 grams

Mina buys **200 g** of Cheddar cheese and **150 g** of Edam cheese.

How much does she pay altogether?

Seb buys some cottage cheese for £1.35.

How many grams of cottage cheese does he get?

Friday 21.01.22

MPI solving multi-step problems

Cut and stick these problems into your books, and underneath show your working out.

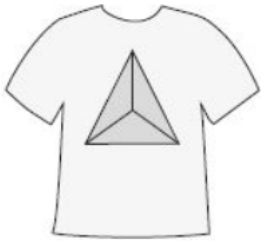
There are 28 pupils in a class.

The teacher has 8 litres of orange juice.

She pours 225 millilitres of orange juice for every pupil.

How much orange juice is left over?

A shop prints designs on T-shirts.



They use this formula to work out the price for printing a design.

price = 60p × number of colours + £1.25

What is the price for printing a design that has **3** colours in it?

£

Amina has **£5** to spend on printing a design.

What is the greatest number of **colours** she can have in the design?

Miss Mills is making jam to sell at the school fair.

Strawberries cost £7.50 per kg.

Sugar costs 79p per kg.

10 glass jars cost £6.90

She uses 12 kg of strawberries and 10 kg of sugar to make 20 jars full of jam.

Calculate the total cost to make 20 jars full of jam.