

Adding Decimals within 1 (Monday)

What mistake has Dora made?

$$0.41 + 0.3 = 0.413$$



Use at least 2 representations to show why she is incorrect.

Compare the numbers sentences using $<$, $>$ or $=$

$$0.7 + 0.03 + 0.001 \bigcirc 0.07 + 0.3 + 0.1$$

$$0.4 + 0.1 + 0.05 \bigcirc 0.3 + 0.2 + 0.05$$

Rosie has some digit cards.



She uses each card once to make a number sentence.

$$\begin{array}{r} \boxed{0} \cdot \boxed{} \boxed{} \boxed{} \\ + \boxed{0} \cdot \boxed{} \boxed{} \boxed{} \\ \hline \cdot \phantom{} \phantom{} \phantom{} \\ \hline \end{array}$$

What is the largest number she can make? What is the smallest?

Subtracting Decimals within 1 (Tuesday)

Here are four calculations.

Which one is the easiest to answer?

Which one is the trickiest to answer?

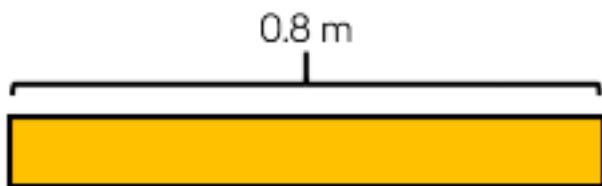
Explain your choice of order.

$$0.45 - 0.3 =$$

$$0.45 - 0.15 =$$

$$0.45 - 0.23 =$$

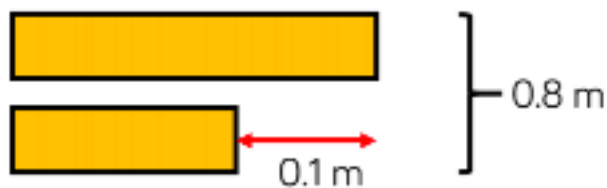
$$0.45 - 0.18 =$$



The strip of paper is 0.8 m long.

It is cut into two unequal parts.

The difference in lengths between the two strips of paper is 0.1 m



How long are the two strips of paper?

Complements to 1 (Wednesday)

$$0.333 + \boxed{} = 1$$

I think the answer is 0.777
because
 $0.3 + 0.7 = 1$
 $0.03 + 0.07 = 0.1$
 $0.003 + 0.007 = 0.01$



Do you agree with Tommy?
Can you explain what his mistake was?

How many different ways can you find a path through the maze, adding each number at a time, to make a total of one?

Start →

0.02	0.01	0.05	0.08	0.3	0.04	0	0.001
0.2	0.06	0.07	0.09	0.001	0.004	0.02	0.04
0.005	0.04	0.2	0.02	0.05	0.06	0.07	0.6
0.5	0.006	0.05	0.02	0.03	0.017	0.006	0.06
0.009	0.8	0.001	0.05	0.016	0.01	0.008	0.007
0.09	0.2	0.08	0.03	0.199	0.01	0.04	0.05
0.01	0.008	0.1	0.09	0.005	0.08	0.02	0.02
0.05	0.03	0.01	0.22	0.07	0.003	0.04	0.09

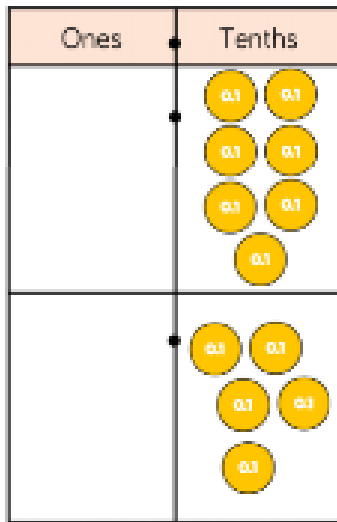
→ 1

Once you have found a way, can you design your own smaller maze for others to solve?

Adding - Crossing the Whole (Thursday)

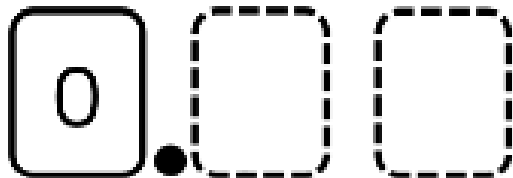
A place value grid is used to solve

$$0.7 + 0.5$$



Alex thinks the answer is 0.12
What mistake has she made?

You will need a partner and a six-sided dice for this game.



Take it in turns rolling the dice twice and placing the digits in the blank spaces above. Record the number in a table.

Swap over with your partner.

Roll the dice again and add your new number to the first number. The winner is the person who after adding 4 numbers is the closest to 1.5 without going over.

Adding Decimals within 1 ANSWERS (Monday)

What mistake has Dora made?

$$0.41 + 0.3 = 0.413$$



Dora has put the 3 tenths in the thousandths place.

The correct answer is 0.71

Use at least 2 representations to show why she is incorrect.

Compare the numbers sentences using $<$, $>$ or $=$

$$0.7 + 0.03 + 0.001 \bigcirc 0.07 + 0.3 + 0.1$$

$$0.4 + 0.1 + 0.05 \bigcirc 0.3 + 0.2 + 0.05$$

$>$

$=$

Rosie has some digit cards.



She uses each card once to make a number sentence.

$$\begin{array}{r} \boxed{0} \cdot \square \square \square \\ + \boxed{0} \cdot \square \square \square \\ \hline \cdot \\ \hline \end{array}$$

What is the largest number she can make? What is the smallest?

Largest: 0.951

Smallest: 0.159

Subtracting Decimals within 1 ANSWERS (Tuesday)

Here are four calculations.
Which one is the easiest to answer?
Which one is the trickiest to answer?
Explain your choice of order.

$$0.45 - 0.3 =$$

$$0.45 - 0.15 =$$

$$0.45 - 0.23 =$$

$$0.45 - 0.18 =$$

Children justify the order they have given.

Possible order:

$$0.45 - 0.23 =$$

0.22

(no exchange)

$$0.45 - 0.15 = 0.3$$

(no exchange with 0)

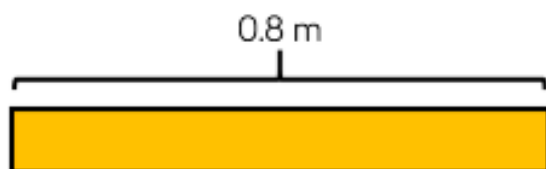
$$0.45 - 0.3 = 0.15$$

(no exchange, different dp)

$$0.45 - 0.18 =$$

0.27

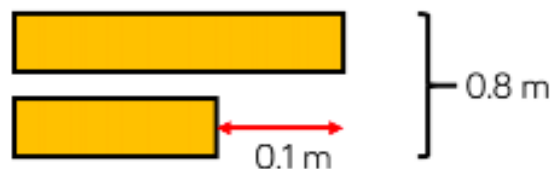
(exchange)



The strip of paper is 0.8 m long.

It is cut into two unequal parts.

The difference in lengths between the two strips of paper is 0.1 m



How long are the two strips of paper?

Strip 1: 0.45 m

Strip 2: 0.35 m

Complements to 1 ANSWERS (Wednesday)

$$0.333 + \boxed{} = 1$$

I think the answer is 0.777 because
 $0.3 + 0.7 = 1$
 $0.03 + 0.07 = 0.1$
 $0.003 + 0.007 = 0.01$



Do you agree with Tommy?
 Can you explain what his mistake was?

Tommy has forgotten that when you have ten in a place value column you need to use your rules of exchanging.

e.g.
 10 tenths = 1 one
 10 hundredths = 1 tenth
 10 thousandths = 1 hundredth

The correct answer is 0.667

How many different ways can you find a path through the maze, adding each number at a time, to make a total of one?

start →	0.02	0.01	0.05	0.08	0.3	0.04	0	0.001
	0.2	0.05	0.07	0.09	0.001	0.004	0.02	0.04
	0.005	0.04	0.2	0.02	0.05	0.05	0.07	0.5
	0.5	0.005	0.05	0.02	0.03	0.017	0.006	0.06
	0.009	0.8	0.001	0.05	0.015	0.01	0.008	0.007
	0.09	0.2	0.08	0.03	0.199	0.01	0.04	0.05
	0.01	0.008	0.1	0.09	0.005	0.08	0.02	0.02
	0.05	0.05	0.01	0.22	0.07	0.003	0.04	0.09 → 1

0.002	0.001	0.001	0.08	0.3	0.04	0	0.001
0.2	0.05	0.07	0.09	0.001	0.004	0.02	0.04
0.005	0.04	0.2	0.02	0.05	0.05	0.07	0.5
0.5	0.005	0.05	0.02	0.03	0.017	0.006	0.06
0.009	0.8	0.001	0.05	0.015	0.01	0.008	0.007
0.09	0.2	0.08	0.03	0.199	0.01	0.04	0.05
0.01	0.008	0.1	0.09	0.005	0.08	0.02	0.02
0.05	0.05	0.01	0.22	0.07	0.003	0.04	0.09

Once you have found a way, can you design your own smaller maze for others to solve?

Adding - Crossing the Whole ANSWERS (Thursday)

A place value grid is used to solve

$$0.7 + 0.5$$

Ones	Tenths

Alex thinks the answer is 0.12
What mistake has she made?

Ten lots of one tenth is one whole.
There are 12 tenths so Alex needs to make an exchange. She should exchange 10 tenths for 1 one.

The correct answer is 1.2

You will need a partner and a six-sided dice for this game.



Take it in turns rolling the dice twice and placing the digits in the blank spaces above. Record the number in a table.

Swap over with your partner.

Roll the dice again and add your new number to the first number. The winner is the person who after adding 4 numbers is the closest to 1.5 **without** going over.

Example:

Player 1 rolls a 1 and a 4. 0.14

Player 1 then rolls a 2 and a 6. 0.26

$$0.14 + 0.26 = 0.38$$

Player 1	Player 2
0.14	0.64
0.38	1.23
0.69	1.49
1.24	1.60