AC
EA
AA
AM
AP

Decimal Fractions (tenths)

Compatible decimal fractions

We are learning about compatible decimal fractions.

Exercise 1

What to do

Some of these additions give the total 1. Write down the number of the questions that give the total 1.

1)	0.3 + 0.7	(2)	0.6 + 0.5	(3)	0.2 + 0.8
4)	0.3 + 0.6	(5)	0.9 + 0.1	(6)	0.4 + 0.3
7)	0.4 + 0.6	(8)	0.4 + 0.7	(9)	0.5 + 0.5
10)	0.3 + 0.4 + 0.3	(11)	0.4 + 0.1 + 0.5	(12)	0.3 + 0.4 + 0.4

Exercise 2

What to do

For these sentences, some of the additions are more than 1, some are equal to 1 and some are less than 1. Copy out each sentence and use the correct sign <, =, or > to make the sentence true.

1)	0.4 + 0.6	1	(2)	0.5 + 0.5	1	(3)	0.8 + 0.2	1
4)	0.3 + 0.8	1	(5)	0.9 + 0.1	1	(6)	0.9 + 0.3	1
7)	0.7 + 0.3	1	(8)	0.6 + 0.7	1	(9)	0.1 + 0.8	1
10)	0.2 + 0.5 + 0.1	1						

Exercise 3

To find the answer to 0.4 + 0.5 + 0.3 + 0.6, Jack looks for combinations of decimal fractions that add to one. In his mind he adds 0.4 + 0.6 to get one and then adds 0.5 + 0.3 to get 0.8.

He shows his working like this:
0.4 + 0.5 + 0.3 + 0.6 = 1 + 0.8 = 1.8

For the problem 0.2 + 0.3 + 0.7 =
he writes:
1 + 0.2 = 1.2

What to do

1) Use the strategy of compatible numbers.
2) Do the problems in your head first.
3) Check you are correct by writing them down. Show them like the examples above

1)	0.3 + 0.5 + 0.7	(2)	0.6 + 0.5 + 0.5	(3)	0.2 + 0.8 + 0.9
4)	0.7 + 0.3 + 0.3 + 0.6	(5)	0.9 + 0.6 + 0.2 + 0.1	(6)	0.4 + 0.3 + 0.6 + 0.2
7)	0.4 + 0.5 + 0.6 + 0.5	(8)	0.3 + 0.9 + 0.1 + 0.7	(9)	0.4 + 0.6 + 0.8 + 0.2
10)	0.3 + 0.4 + 0.3	(11)	0.4 + 0.1 + 0.5 + 0.2	(12)	0.2 + 0.9 + 0.4 + 0.4

Exercise 4

To find the answer to 4.4 + 0.5 + 2.3 + 0.6, Jack looks for combinations of decimal fractions that add to a whole number. In his mind he adds 4.4 + 0.6 to get five and then adds 0.5 + 2.3 to get 2.8.

He shows his working like this:
4.4 + 0.5 + 2.3 + 0.6 = 5 + 2.8 = 7.8

What to do

1) Use the strategy of compatible numbers.
2) Do the problems in your head first.
3) Check you are correct by writing them down. Show them like the examples above

1)	1.6 + 1.5 + 0.5	(2)	0.3 + 0.5 + 3.7	(3)	0.2 + 0.8 + 4.9
4)	2.7 + 0.3 + 1.4	(5)	5.8 + 0.6 + 0.4	(6)	0.6 + 1.4 + 6.2
7)	0.3 + 1.8 + 2.7 + 0.1	(8)	1.4 + 1.3 + 0.6 + 0.2	(9)	0.7 + 3.3 + 0.3 + 0.6
10)	1.9 + 0.6 + 2.2 + 0.1	(11)	2.3 + 1.9 + 0.1 + 0.7	(12)	4.2 + 1.7 + 0.8
13)	3.4 + 2.5 + 0.6 + 0.5	(14)	3.4 + 0.6 + 0.8 + 1.2	(15)	5.3 + 0.4 + 0.7 + 0.6
16)	2.3 + 3.1 + 0.9 + 0.7	(17)	0.2 + 0.3 + 1.5 + 3.4	(18)	0.2 + 5.9 + 3.4 + 0.4
19)	0.3 + 2.4 + 0.3	(20)	0.4 + 2.1 + 0.5 + 1.2 + 2.3 + 0.8		

Exercise 5

To find the answer to 4.4 + 1.5 + 2.3 + 1.6, Jack looks for combinations of decimal fractions that add to a whole number. In his mind he adds 4.4 + 1.6 to get six and then adds 1.5 + 2.3 to get 3.8.

He shows his working like this:
4.4 + 1.5 + 2.3 + 1.6 = 6 + 3.8 = 9.8

What to do

1) Use the strategy of compatible numbers.
2) Do the problems in your head first.
3) Check you are right by writing them down. Show them like the examples above

1)	2.2 + 1.8 + 3.9	(2)	2.3 + 0.5 + 3.7	(3)	1.6 + 1.5 + 2.5
4)	2.8 + 3.6 + 3.4	(5)	2.7 + 3.3 + 1.4	(6)	3.6 + 1.4 + 1.2
7)	3.3 + 1.8 + 4.7 + 6.1	(8)	2.3 + 1.9 + 4.1 + 1.7	(9)	3.7 + 3.3 + 0.3 + 1.6
10)	3.4 + 1.3 + 1.6 + 0.2	(11)	5.2 + 1.7 + 2.8	(12)	3.9 + 3.6 + 3.2 + 3.1
13)	1.4 + 1.6 + 3.8 + 2.2	(14)	3.4 + 0.5 + 1.6 + 2.5	(15)	1.2 + 5.9 + 3.4 + 3.4

Exercise 6

To find the answer to 0.4 + 0.5 + 0.3 - 0.8, Jack looks at combining decimal fractions to make the problem simpler. In his mind he adds 0.5 + 0.3 to get 0.8 and then subtracts the 0.8.

He shows his working like this:
0.4 + 0.5 + 0.3 - 0.8 = 0.4

What to do

1) Use the strategy of compatible numbers.
2) Check you are right by writing them down. Show them like the examples above.

1)	0.3 + 0.5 - 0.7 + 0.2	(2)	0.6 - 0.8 + 0.5 + 0.2	(3)	0.2 + 0.8 - 0.9 - 0.1
4)	0.7 - 0.3 - 0.3 + 0.6	(5)	0.9 - 0.6 - 0.2 - 0.1	(6)	0.4 + 0.3 - 0.6 + 0.2
7)	0.4 - 0.3 - 0.6 + 0.5 + 0.4	(8)	0.3 + 0.9 - 0.2 - 0.7	(9)	0.4 - 0.6 + 0.8 - 0.2
10)	0.3 + 0.4 - 0.7	(11)	0.3 - 0.5 + 0.2 + 0.6	(12)	0.6 - 0.9 + 0.3 + 0.4

Compatible decimal fractions
Answers

Exercise 1

Questions 1,3,5,7,9,10,11 give the total of one

1)	1	(2)	1.1	(3)	1
4)	0.9	(5)	1	(6)	0.7
7)	1	(8)	1.1	(9)	1
10)	1	(11)	1	(12)	1.1

Exercise 2

1)	=	(2)	=	(3)	=
4)	>	(5)	=	(6)	>
7)	=	(8)	>	(9)	<
10)	<				

Exercise 3

1)	1 + 0.5 = 1.5	(2)	1 + 0.6 = 1.6	(3)	1 + 0.9 = 1.9
4)	1 + 0.9 = 1.9	(5)	1 + 0.8 = 1.8	(6)	1 + 0.5 = 1.5
7)	1 + 1 = 2	(8)	1 + 1 = 2	(9)	1 + 1 = 2
10)	1	(11)	1 + 0.2 = 1.2	(12)	1 + 0.9 = 1.9

Exercise 4

1)	2 + 1.6 = 3.6	(2)	4 + 0.5 = 4.5	(3)	1 + 4.9 = 5.9
4)	3 + 1.4 = 4.4	(5)	1 + 5.8 = 6.8	(6)	2 + 6.2 = 8.2
7)	3 + 1.9 = 4.9	(8)	2 + 1.5 = 3.5	(9)	1 + 3.9 = 4.9 or 4 + 0.9 =4.9
10)	2 + 2.8 = 4.8	(11)	2 + 3 = 5	(12)	5 + 1.7 = 6.7
13)	4 + 3 = 7	(14)	4 + 2 = 6	(15)	6 + 1 = 7
16)	3 + 4 = 7	(17)	2 + 3.4 = 5.4	(18)	4 + 5.9 = 9.9
19)	3	(20)	3 + 2 + 2.3 = 7.3		

Exercise 5

1)	4 + 3.9 = 7.9	(2)	6 + 0.5 = 6.5	(3)	4 + 1.6 = 5.6
4)	7 + 2.8 = 9.8	(5)	6 + 1.4 = 7.4	(6)	5 + 1.2 = 6.2
7)	8 + 7.9 = 15.9	(8)	4 + 6 = 10	(9)	7 + 1.9 = 8.9
10)	5 + 1.5 = 6.5	(11)	8 + 1.7 = 9.7	(12)	7 + 6.8 = 13.8
13)	3 + 6 = 9	(14)	5 + 3 = 8	(15)	8 + 5.9 = 13.9

Exercise 6

1)	0.3	(2)	0.5	(3)	0
4)	0.7	(5)	0	(6)	0.3
7)	0.4	(8)	0.3	(9)	0.4
10)	0	(11)	0.6	(12)	0.4