Reasoning and Problem Solving
Step 3: Complements to 1

National Curriculum Objectives:

Mathematics Year 5: (5F10) Solve problems involving number up to 3dp.
Mathematics Year 5: (5M9a) Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Differentiation:

Questions 1, 4, 7 (Reasoning)
Developing Consider a given statement about adding decimals and explain why it is correct or incorrect. Decimal complements to 1 involve tenths and hundredths.
Expected Consider a given statement about adding decimals and explain why it is correct or incorrect. Decimal complements to 1 involve tenths, hundredths and thousandths.
Greater Depth Consider a given statement about adding decimals and explain why it is correct or incorrect. Decimal complements to 1 involve tenths, hundredths and thousandths.

Questions 2, 5, 8 (Problem Solving)
Developing Place a given number of counters on a place value chart to create a complement to 1. Place value includes tenths and hundredths. Correct number of counters given.
Expected Place a given number of counters on a place value chart to create a complement to 1. Place value includes tenths, hundredths and thousandths. Correct number of counters given.
Greater Depth Place a given number of counters on a place value chart to create a complement to 1. Place value includes tenths, hundredths and thousandths. Children to select the correct number of counters from those given.

Questions 3, 6, 9 (Reasoning)
Developing Children find odd one out from given calculations. Includes adding 2 decimal number with 2 decimal places.
Expected Children find odd one out from given calculations. Includes adding 2 decimal numbers with 3 decimal places.
Greater Depth Children find odd one out from given calculations. Includes adding 3 decimal numbers with 3 decimal places.

More Year 5 Decimals resources.

Did you like this resource? Don't forget to review it on our website.

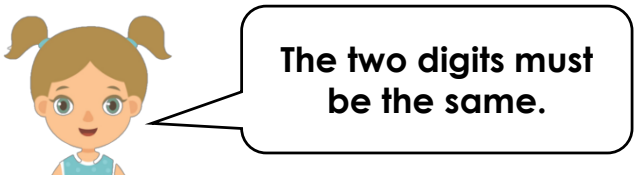
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Complements to 1

1a. Look at the calculation below.

$$0.3\square + 0.6\square = 1$$

Kayla says,



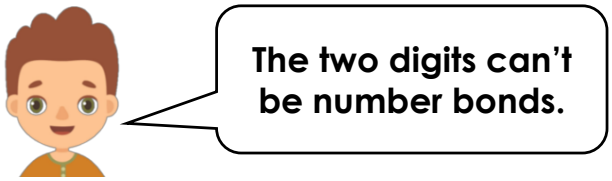
Is Kayla correct? Explain your answer.

D R

1b. Look at the calculation below.

$$0.7\square + 0.2\square = 1$$

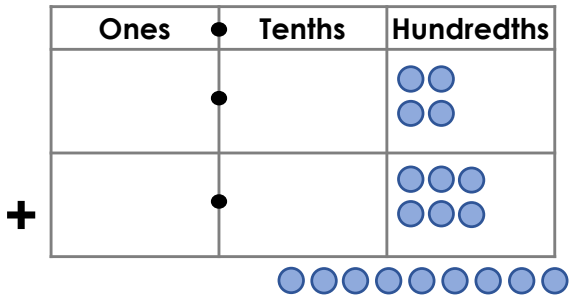
Nick says,



Is Nick correct? Explain your answer.

D R

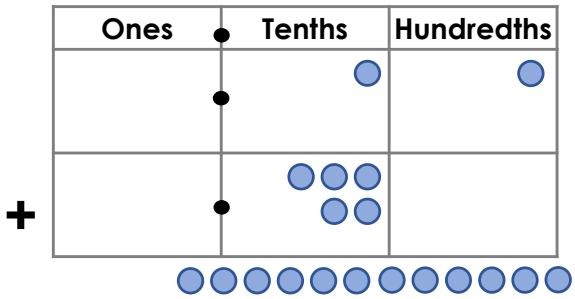
2a. Use the counters to create a complement to 1. Some counters have been placed for you.



Place counters into any column to indicate their value. Use all the counters given.

D PS

2b. Use the counters to create a complement to 1. Some counters have been placed for you.



Place counters into any column to indicate their value. Use all the counters given.

D PS

3a. Find the odd one out.

0.85 + 0.15
0.75 + 0.35
0.05 + 0.95

Explain your answer.

D R

3b. Find the odd one out.

0.11 + 0.89
0.82 + 0.82
0.11 + 0.99

Explain your answer.

D R

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Complements to 1

4a. Look at the calculation below.

$$0.3\square 5 + 0.6\square 5 = 1$$

Joey says,



The two digits will always be bonds to ten.

Is Joey correct? Explain your answer.

E

R

Complements to 1

4b. Look at the calculation below.

$$0.67\square + 0.32\square = 1$$

Gareth says,



The two digits will always be even.

Is Gareth correct? Explain your answer.

E

R

5a. Use the counters to create a complement to 1. Some counters have been placed for you.

	Ones	Tenths	Hundredths	Thousandths
	•	●●● ●●●	●	●
+	•		●●	

●●●●●●●●●●●●●●●●●●●●

Place counters into any column to indicate their value. Use all the counters given.

E

5b. Use the counters to create a complement to 1. Some counters have been placed for you.

	Ones	Tenths	Hundredths	Thousandths
	•		●●● ●●●	
+	•			

●●●●●●●●●●●●●●●●●●●●

Place counters into any column to indicate their value. Use all the counters given.

E

PS

6a. Find the odd one out.

0.123 + 0.877
0.945 + 0.055
0.025 + 0.975
0.207 + 0.803

Explain your answer.

E

R

6b. Find the odd one out.

0.433 + 0.567
0.59 + 0.41
0.023 + 0.087
0.307 + 0.693

Explain your answer.

E

R

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Complements to 1

7a. Look at the calculation below.

$$0.1\square6 + 0.8\square4 = 1$$

Jamal says,



There are 5 possible answers.

Is Jamal correct? Explain your answer.

GD R

Complements to 1

7b. Look at the calculation below.

$$0.99\square + 0.00\square = 1$$

Anaya says,



The digits will be < 0 and > 9.

Is Anaya correct? Explain your answer.

GD R

8a. Use the counters to create a complement to 1. Some counters have been placed for you.

	Ones	Tenths	Hundredths	Thousandths
	•		●●●●● ●●●●●	
+	•			

●●●●●●●●●●●●●●●●●●●●
●●●●●●●●●●●●●●●●●●●●

Use as many counters as you need.

GD

8b. Use the counters to create a complement to 1. Some counters have been placed for you.

	Ones	Tenths	Hundredths	Thousandths
	•			
+	•	●		

●●●●●●●●●●●●●●●●●●●●
●●●●●●●●●●●●●●●●●●●●

Use as many counters as you need.

GD PS

9a. Find the odd one out.

0.121 + 0.212 + 0.667
0.345 + 0.435 + 0.22
0.34 + 0.36 + 0.3
0.567 + 0.223 + 0.21
0.3 + 0.6 + 0.099
0.671 + 0.32 + 0.009

Explain your answer.

GD R

9b. Find the odd one out.

0.9 + 0.09 + 0.009
0.123 + 0.987 + 0.013
0.468 + 0.222 + 0.42
0.39 + 0.5 + 0.12
0.3 + 0.003 + 0.03
0.903 + 0.007 + 0.09

Explain your answer.

GD R

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Reasoning and Problem Solving
Complements to 1

Developing

1a. Kayla is incorrect. The digits will be number bonds to ten. The two digits will only be the same if they are both 5.

2a.

Ones	Tenths	Hundredths
0	Sum of 9	Sum of 10

3a. 0.75 + 0.35 is the odd one out because it is not a complement to 1; the others are.

Expected

4a. Joey is incorrect. The digits will never be number bonds as then the answer would not be 1 but 1.01. The digits will be a pair of bonds to 9

5a.

Ones	Tenths	Hundredths	Thousandths
0	Sum of 9	Sum of 9	Sum of 10

6a. 0.207 + 0.803 is the odd one out because it is not a complement to 1; the others are.

Greater Depth

7a. Jamal is incorrect as there are more than 5 possible answers.

8a.

Ones	Tenths	Hundredths	Thousandths
0	Sum of 9	Sum of 10	0

9a. 0.3 + 0.6 + 0.099 is the odd one out because it is not a complement to 1; the others are.

Reasoning and Problem Solving
Complements to 1

Developing

1b. Nick is incorrect. The 2 digits must be number bonds to ten.

2b.

Ones	Tenths	Hundredths
0	Sum of 9	Sum of 10

3b. 0.11 + 0.89 is the odd one out because it is a complement to 1; the others aren't.

Expected

4b. Gareth is incorrect. The digits will always either be both odd or both even as they will be number bonds to 10.

5b.

Ones	Tenths	Hundredths	Thousandths
0	Sum of 9	Sum of 10	0

6b. 0.023 + 0.087 is the odd one out because it is not a complement to 1; the others are.

Greater Depth

7b. Anaya is incorrect. The digits are all greater than 0, however they are less than or equal to 9 not greater than or equal to 9.

8b.

Ones	Tenths	Hundredths	Thousandths
0	Sum of 10	0	0

9b. 0.903 + 0.007 + 0.09 is the odd one out because it is a complement to 1; the others aren't.

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