Homework/Extension
Step 10: Decimal Sequences

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 and 7 (Varied Fluency)
Developing Use given facts to complete the decimal sequence. Sequence involves addition or subtraction of tenths and hundredths.
Expected Use given facts to complete the decimal sequence. Sequence involves addition or subtraction of tenths, hundredths and thousandths.
Greater Depth Use given facts to complete the decimal sequence. Sequence involves addition and subtraction of tenths, hundredths and thousandths in a multi-step problem.

Questions 2, 5 and 8 (Varied Fluency)
Developing Identify the decimal sequence to state whether a given statement is true or false. Sequence involves addition or subtraction of tenths and hundredths.
Expected Identify the decimal sequence to state whether a given statement is true or false. Sequence involves addition or subtraction of tenths, hundredths and thousandths.
Greater Depth Identify the decimal sequence to state whether a given statement is true or false. Sequence involves addition and subtraction of tenths, hundredths and thousandths.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Identify decimal sequence rules to complete decimal grid. Sequences involve addition of tenths and hundredths.
Expected Identify decimal sequence rules to complete decimal grid. Sequences involve subtraction of tenths, hundredths and thousandths.
Greater Depth Identify decimal sequence rules to complete decimal grid. Sequences involve addition or subtraction of tenths, hundredths and thousandths.

More Year 5 Decimals resources.

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

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Decimal Sequences

1. Adam is wrapping presents. He wraps 8 presents using 15.75cm of ribbon on each. Use this information to complete the sequence below and find the total length of ribbon used.
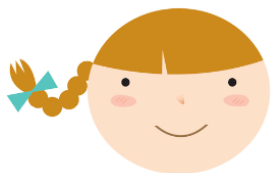
15.75				78.75			

2. True or false? Lisa's description matches the sequence.

> The rule is subtract 1.48 and the fourth term is 8.38.

11.3	9.84	8.38	6.92	5.46	4	2.54

3. Find the rules and use them to complete the decimal grid.

1.5	1.8		2.4	2.7
1.53	1.83	2.13		2.73
1.56		2.16	2.46	
1.59	1.89		2.49	2.79
	1.92	2.22		2.82

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Homework/Extension – Decimal Sequences – Year 5 Developing

Decimal Sequences

4. Jonny's bicycle tyre gets a puncture when he is 1.488km from home. He can cycle 0.186km before needing to stop and pump it up. Use this information to complete the sequence below.

1.488			0.744				🏠

VF
HW/Ext

5. True or false? Toby's description matches the sequence.

> The first term is 4.321 and the sequence increases by 0.080 each time.

3.835	3.916	3.997	4.078	4.159	4.24	4.321

VF
HW/Ext

6. Find the rules and use them to complete the decimal grid.

2.255	2.005	1.755		1.255
2.25	2		1.5	
	1.995	1.745		1.245
2.24		1.74	1.49	
	1.985		1.485	

RPS
HW/Ext

Decimal Sequences

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7. Caroline is filling a paddling pool with a hole in it. For every 2.55L bucket of water she adds, 0.752L of water leaks out. Use this information to complete the sequence and find how much water is in the paddling pool when she has added 9 buckets.

1.798			7.192					

VF
HW/Ext

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8. True or false? Robin's description matches the sequence.

The rule is add 1.242 each time. The tenth term will be 2.156.

1.116	2.356	3.596	4.836	6.076	7.316	8.556

VF
HW/Ext

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9. Find the rules and use them to complete the decimal grid.

5.858	5.846		5.822	
5.358		5.334		5.310
4.858	4.846		4.822	4.810
	4.346	4.334		
3.858			3.822	

RPS
HW/Ext

Developing

1.

15.75	31.5	47.25	63	78.75	94.5	110.25	126

2. False. The rule is subtract 1.46 and the fourth term is 6.92.

3. The rule across the table is add 0.3 and the rule down the table is add 0.03.

1.5	1.8	2.1	2.4	2.7
1.53	1.83	2.13	2.43	2.73
1.56	1.86	2.16	2.46	2.76
1.59	1.89	2.19	2.49	2.79
1.62	1.92	2.22	2.52	2.82

Expected

4.

1.488	1.302	1.116	0.93	0.744	0.558	0.372	0.186

5. False. The first term is 3.853 and the sequence increases by 0.081 each time.

6. The rule across the table is subtract 0.25 and the rule down the table is subtract 0.005.

2.255	2.005	1.755	1.505	1.255
2.25	2	1.75	1.5	1.25
2.245	1.995	1.745	1.495	1.245
2.24	1.99	1.74	1.49	1.24
2.235	1.985	1.735	1.485	1.235

Greater Depth

7.

1.798	3.596	5.394	7.192	8.99	10.788	12.586	14.384	16.182

8. False. The rule is add 1.24 and the tenth term will be 12.276.

9. The rule across the table is subtract 0.012 and the rule down the table is subtract 0.5.

5.858	5.846	5.834	5.822	5.810
5.358	5.346	5.334	5.322	5.310
4.858	4.846	4.834	4.822	4.810
4.358	4.346	4.334	4.322	4.310
3.858	3.846	3.834	3.822	3.810