Varied Fluency
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:

Developing Questions to support calculating decimal sequences. Decimal places involve tenths and hundredths. Sequences involve either addition or subtraction.
Expected Questions to support calculating decimal sequences. Decimal places involve tenths, hundredths and thousandths. Sequences involve either addition or subtraction.
Greater Depth Questions to support calculating decimal sequences. Decimal places involve tenths, hundredths and thousandths. Sequences may involve addition and subtraction of differing values in an increasing or decreasing pattern.

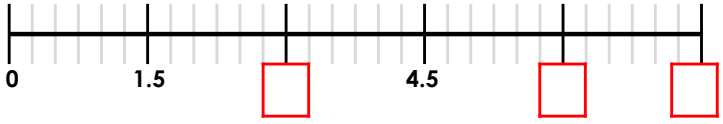
More Year 5 Decimals resources.

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

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Decimal Sequences

1a. Use the number line to find the missing numbers in the sequence.



D VF

2a. Look at the sequences below.

0.4	0.6	0.8	1	1.2
0.2	0.7	1.2	1.7	2.2
0.25	0.38	0.51	0.64	0.77

Write a rule for each and find the next 3 terms in the sequences.

D VF

3a.

The first term is 2.3
The rule is + 0.09

Find the 3rd, 5th and 7th term of the sequence.

D VF

4a.

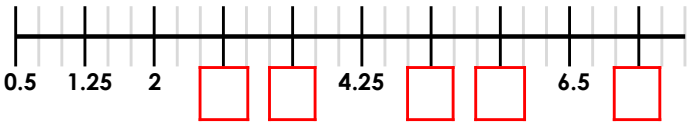
The 1st term is 0.95
The 3rd term is 0.75
The 5th term is 0.55

Find the rule of this sequence.

D VF

Decimal Sequences

1b. Use the number line to find the missing numbers in the sequence.



D VF

2b. Look at the sequences below.

1.5	1.3	1.1	0.9	0.7
4.5	3.9	3.3	2.7	2.1
1	0.89	0.78	0.67	0.56

Write a rule for each and find the next 3 terms in the sequences.

D VF

3a.

The first term is 0.75
The rule is + 0.1

Find the 4th, 6th and 10th term of the sequence.

D VF

4b.

The 2nd term is 1.35
The 4th term is 1.85
The 6th term is 2.35

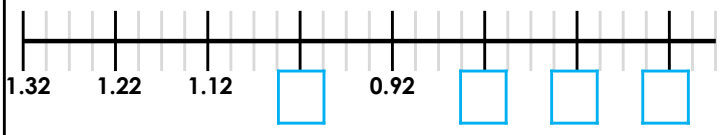
Find the rule of this sequence.

D VF

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Decimal Sequences

5a. Use the number line to find the missing numbers in the sequence.



E VF

6a. Look at the sequences below.

2.53	2.553	2.576	2.599	2.622
0.99	0.96	0.93	0.9	0.87
0.892	0.885	0.878	0.871	0.864

Write a rule for each and find the next 3 terms in the sequences.

E VF

7a.

The first term is 0.23
The rule is + 0.46

Find the 2nd, 4th and 7th term of the sequence.

E VF

8a.

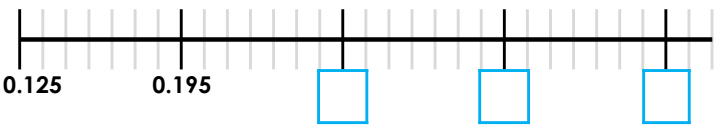
The 3rd term is 7.603.
The 6th term is 7.693.
The 9th term is 7.783.

Find the rule of this sequence.

E VF

Decimal Sequences

5b. Use the number line to find the missing numbers in the sequence.



E VF

6b. Look at the sequences below.

7.98	6.99	6	5.01	4.02
0.043	0.11	0.177	0.244	0.311
9.239	9.109	8.979	8.849	8.719

Write a rule for each and find the next 3 terms in the sequences.

E VF

7b.

The first term is 0.452
The rule is – 0.005

Find the 3rd, 5th and 7th term of the sequence.

E VF

8b.

The 5th term is 3.98.
The 10th term is 3.93.
The 15th term is 3.88.

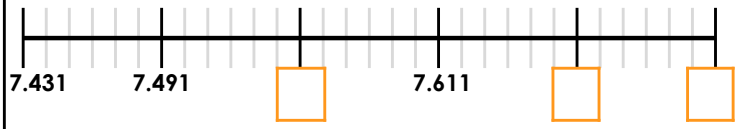
Find the rule of this sequence.

E VF

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Decimal Sequences

9a. Use the number line to find the missing numbers in the sequence.



GD VF

10a. Look at the sequences below.

0.085	0.078	0.071	0.064	0.057
12.432	12.4	12.368	12.336	12.304
0.543	0.643	0.843	1.143	1.543

Write a rule for each and find the next 3 terms in the sequences.

GD VF

11a.

The first term is 12.965
The rule is – 2.9

Find the 4th, 6th and 8th term of the sequence.

GD VF

12a.

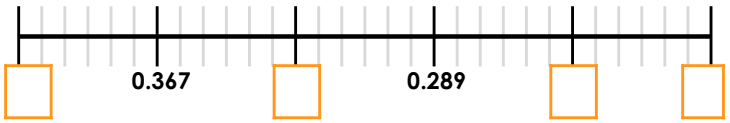
The 6th term is 0.543
The 9th term is 0.567
The 12th term is 0.591

Find the rule of this sequence.

GD VF

Decimal Sequences

9b. Use the number line to find the missing numbers in the sequence.



GD VF

10b. Look at the sequences below.

0.9	0.804	0.708	0.612	0.516
0.36	0.38	0.42	0.48	0.56
7.345	7.245	7.045	6.745	6.345

Write a rule for each and find the next 3 terms in the sequences.

GD VF

11b.

The first term is 1.954
The rule is – 0.032

Find the 4th, 9th and 11th term of the sequence.

GD VF

12b.

The 6th term is 13.944
The 13th term is 13.965
The 20th term is 13.986

Find the rule of this sequence.

GD VF

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Varied Fluency
Decimal Sequences

Developing

1a. 3, 6, 7.5

2a. 1.4, 1.6, 1.8 (Rule = + 0.2)
2.7, 3.2, 3.7 (Rule = + 0.5)
0.9, 1.03, 1.16 (Rule = + 0.13)

3a. 2.48, 2.66, 2.84

4a. The rule is – 0.1

Expected

5a. 1.02, 0.82, 0.72, 0.62

6a. 2.645, 2.668, 2.691 (Rule = + 0.023)
0.84, 0.81, 0.78 (Rule = – 0.03)
0.857, 0.85, 0.843 (Rule= – 0.007)

7a. 0.69, 1.61, 2.99

8a. The rule is + 0.03

Greater Depth

9a. 7.551, 7.671, 7.731

10a. 0.05, 0.043, 0.036 (Rule = – 0.007)
12.272, 12.24, 12.208 (Rule = – 0.032)
2.043, 2.643, 3.343 (Rule = the difference increases by 0.1 each term).

11a. 4.265, -1.535, -7.335

12a. The rule is + 0.008

Varied Fluency
Decimal Sequences

Developing

1b. 2.75, 3.5, 5, 5.75, 7.25

2b. 0.5, 0.3, 0.1 (Rule = – 0.2)
1.5, 0.9, 0.3 (Rule = – 0.6)
0.45, 0.34, 0.23 (Rule = – 0.11)

3b. 1.05, 1.25, 1.65

4b. The rule is + 0.25

Expected

5b. 0.265, 0.335, 0.405

6b. 3.03, 2.04, 1.05 (Rule = – 0.99)
0.378, 0.445, 0.512 (Rule = + 0.067)
8.589, 8.459, 8.329 (Rule = – 0.13)

7b. 0.442, 0.432, 0.422

8b. The rule is – 0.01

Greater Depth

9b. 0.406, 0.328, 0.25, 0.211

10b. 0.42, 0.324, 0.228 (The rule is – 0.096)
0.66, 0.78, 0.92 (The rule is the difference increases by 0.02 each term).
5.845, 5.245, 4.545 (Rule = the difference decreases by 0.1 each term).

11b. 1.858, 1.698, 1.634

12b. The rule is + 0.003

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