No More "Menacing Multiplication" and "Laborious Long Division" - Understanding Procedures through Number Sense in Grades 3-5

Math Champions
Professional Development, LLC

2019 NCSM Annual Conference

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Progression for introducing algorithms with manipulatives:

1. Start with manipulatives
2. Introduce and demonstrate the algorithm and have students work with the manipulatives.
3. Students work with both the manipulatives and the computation.
4. Students transition to the computation

42 x 2 | 42 x 4 | 3 x 36

245 x 3 | 0.4 x 3 | 0.04 x 3

675 x 8

23 x 5

399 x 6

36 ÷ 3

53 ÷ 2

331 ÷ 2

121 ÷ 2

1.8 ÷ 3

1435 ÷ 8

42 ÷ 3

192 ÷ 4

25.6 ÷ 8

1	1	1	1	1
1	1	1	1	1
1	1	1	1	1
1	1	1	1	1
1	1	1	1	1
1	1	1	1	1
1	1	1	1	1

10	10	10	10	10
10	10	10	10	10
10	10	10	10	10
10	10	10	10	10
10	10	10	10	10
10	10	10	10	10
10	10	10	10	10

100	100	100	100	100
100	100	100	100	100
100	100	100	100	100
100	100	100	100	100
100	100	100	100	100
100	100	100	100	100
100	100	100	100	100

0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1

0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01