Unit 2 Module 3 Session 4
Problem String- Ten Facts and More
Problems and Investigations-Multiplication Table, Part 2

Getting Ready-

- ™ T2 Grid Paper

- SB 57 Multiplication Table

- Student Math Journals

- Green, Blue, Purple, and Light Blue Colored Pencils (class set)

Vocabulary

Equation

Commutative property of multiplication

Multiple

Product

Factor

- Interpret products of whole numbers
- Multiply using the commutative property
- Fluently multiply with products to 100 using strategies
- Identify patterns among multiplication facts and explain them using properties of operations

Problem String: Tens Facts and More
Today's Date:

1) 4 × 10

Sample Strategies

2) 4 × 5

Sample Strategies

3) 4 × 6

Sample Strategies &

4) 4 × 9

Sample Strategies

5) 7x10

Sample Strategies

6) 7x5

Sample Strategies

7) 7x6

Sample Strategies

8) 7x9

Sample Strategies

We will color the Half Ten facts (x5) **green**

We will color the Half Tens facts (x5) **green**

We will color the Half Tens Plus One facts (x6) **light blue**

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Multiplication Table

×	0	1	2	3	4	5	6	7	8	9	10
0	0 × 0 = 0	0 × 1 = 0	0 × 2 = 0	0 × 3 = 0	0 × 4 = 0	0 × 5 = 0	0 × 6 = 0	0 × 7 = 0	0 × 8 = 0	0 × 9 = 0	0 × 10 = 0
1	1 × 0 = 0	1 × 1 = 1	1 × 2 = 2	1 × 3 = 3	1 × 4 = 4	1 × 5 = 5	1 × 6 = 6	1 × 7 = 7	1 × 8 = 8	1 × 9 = 9	1 × 10 = 10
2	2 × 0 = 0	2 × 1 = 2	2 × 2 = 4	2 × 3 = 6	2 × 4 = 8	2 × 5 = 10	2 × 6 = 12	2 × 7 = 14	2 × 8 = 16	2 × 9 = 18	2 × 10 = 20
3	3 × 0 = 0	3 × 1 = 3	3 × 2 = 6	3 × 3 = 9	3 × 4 = 12	3 × 5 = 15	3 × 6 = 18	3 × 7 = 21	3 × 8 = 24	3 × 9 = 27	3 × 10 = 30
4	4 × 0 = 0	4 × 1 = 4	4 × 2 = 8	4 × 3 = 12	4 × 4 = 16	4 × 5 = 20	4 × 6 = 24	4 × 7 = 28	4 × 8 = 32	4 × 9 = 36	4 × 10 = 40
5	5 × 0 = 0	5 × 1 = 5	5 × 2 = 10	5 × 3 = 15	5 × 4 = 20	5 × 5 = 25	5 × 6 = 30	5 × 7 = 35	5 × 8 = 40	5 × 9 = 45	5 × 10 = 50
6	6 × 0 = 0	6 × 1 = 6	6 × 2 = 12	6 × 3 = 18	6 × 4 = 24	6 × 5 = 30	6 × 6 = 36	6 × 7 = 42	6 × 8 = 48	6 × 9 = 54	6 × 10 = 60
7	7 × 0 = 0	7 × 1 = 7	7 × 2 = 14	7 × 3 = 21	7 × 4 = 28	7 × 5 = 35	7 × 6 = 42	7 × 7 = 49	7 × 8 = 56	7 × 9 = 63	7 × 10 = 70
8	8 × 0 = 0	8 × 1 = 8	8 × 2 = 16	8 × 3 = 24	8 × 4 = 32	8 × 5 = 40	8 × 6 = 48	8 × 7 = 56	8 × 8 = 64	8 × 9 = 72	8 × 10 = 80
9	9 × 0 = 0	9 × 1 = 9	9 × 2 = 18	9 × 3 = 27	9 × 4 = 36	9 × 5 = 45	9 × 6 = 54	9 × 7 = 63	9 × 8 = 72	9 × 9 = 81	9 × 10 = 90
10	10 × 0 = 0	10 × 1 = 10	10 × 2 = 20	10 × 3 = 30	10 × 4 = 40	10 × 5 = 50	10 × 6 = 60	10 × 7 = 70	10 × 8 = 80	10 × 9 = 90	10 × 10 = 100

Zero facts (× 0)

Ones facts (× 1)

Doubles facts (× 2)

Doubles Plus One Set facts (× 3)

Double-Doubles facts (× 4)

Half-Tens facts (× 5)

Half-Tens Plus One Set facts (× 6)

Double-Double-Doubles facts (× 8)
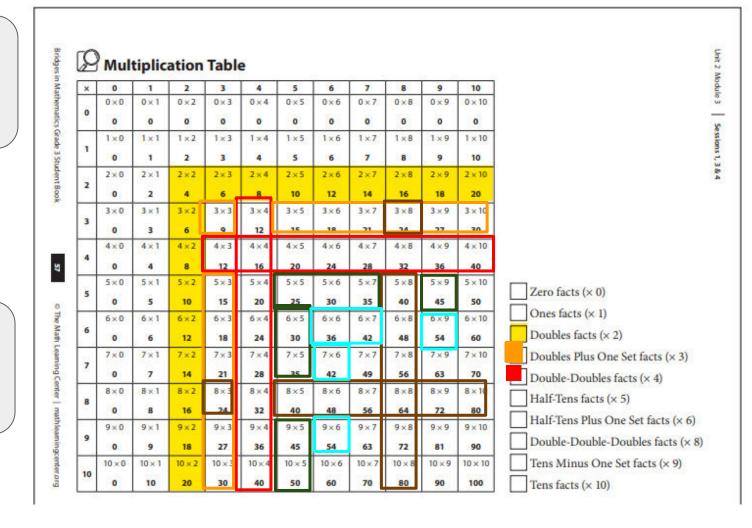
Tens Minus One Set facts (× 9)

Tens facts (× 10)

We will color the Half Tens Plus One facts
(x6) **light blue**

We will color the Tens Minus One fact
(x9) **purple**

Multiplication Table

×	0	1	2	3	4	5	6	7	8	9	10
0	0×0 0	0×1 0	0×2 0	0×3 0	0×4 0	0×5 0	0×6 0	0×7 0	0×8 0	0×9 0	0×10 0
1	1×0 0	1×1 1	1×2 2	1×3 3	1×4 4	1×5 5	1×6 6	1×7 7	1×8 8	1×9 9	1×10 10
2	2×0 0	2×1 2	2×2 4	2×3 6	2×4 8	2×5 10	2×6 12	2×7 14	2×8 16	2×9 18	2×10 20
3	3×0 0	3×1 3	3×2 6	3×3 9	3×4 12	3×5 15	3×6 18	3×7 21	3×8 24	3×9 27	3×10 30
4	4×0 0	4×1 4	4×2 8	4×3 12	4×4 16	4×5 20	4×6 24	4×7 28	4×8 32	4×9 36	4×10 40
5	5×0 0	5×1 5	5×2 10	5×3 15	5×4 20	5×5 25	5×6 30	5×7 35	5×8 40	5×9 45	5×10 50
6	6×0 0	6×1 6	6×2 12	6×3 18	6×4 24	6×5 30	6×6 36	6×7 42	6×8 48	6×9 54	6×10 60
7	7×0 0	7×1 7	7×2 14	7×3 21	7×4 28	7×5 35	7×6 42	7×7 49	7×8 56	7×9 63	7×10 70
8	8×0 0	8×1 8	8×2 16	8×3 24	8×4 32	8×5 40	8×6 48	8×7 56	8×8 64	8×9 72	8×10 80
9	9×0 0	9×1 9	9×2 18	9×3 27	9×4 36	9×5 45	9×6 54	9×7 63	9×8 72	9×9 81	9×10 90
10	10×0 0	10×1 10	10×2 20	10×3 30	10×4 40	10×5 50	10×6 60	10×7 70	10×8 80	10×9 90	10×10 100

- Zero facts (× 0)
- Ones facts (× 1)
- Doubles facts (× 2)
- Doubles Plus One Set facts (× 3)
- Double-Doubles facts (× 4)
- Half-Tens facts (× 5)
- Half-Tens Plus One Set facts (× 6)
- Double-Double-Doubles facts (× 8)
- Tens Minus One Set facts (× 9)
- Tens facts (× 10)

We will color the Tens Minus One facts (x9) **purple**

We will color the Tens facts (x9) **blue**

We will color the Tens facts (x9) **blue**

Multiplication Table

×	0	1	2	3	4	5	6	7	8	9	10
0	0×0 = 0	0×1 = 0	0×2 = 0	0×3 = 0	0×4 = 0	0×5 = 0	0×6 = 0	0×7 = 0	0×8 = 0	0×9 = 0	0×10 = 0
1	1×0 = 0	1×1 = 1	1×2 = 2	1×3 = 3	1×4 = 4	1×5 = 5	1×6 = 6	1×7 = 7	1×8 = 8	1×9 = 9	1×10 = 10
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10	10×0 = 0	10×1 = 10	10×2 = 20	10×3 = 30	10×4 = 40	10×5 = 50	10×6 = 60	10×7 = 70	10×8 = 80	10×9 = 90	10×10 = 100

Zero facts (× 0)
Ones facts (× 1)
Doubles facts (× 2)
Doubles Plus One Set facts (× 3)
Double-Doubles facts (× 4)
Half-Tens facts (× 5)
Half-Tens Plus One Set facts (× 6)
Double-Double-Doubles facts (× 8)
Tens Minus One Set facts (× 9)
Tens facts (× 10)

Multiplication Table

×	0	1	2	3	4	5	6	7	8	9	10
0	0 × 0 / 0	0 × 1 / 0	0 × 2 / 0	0 × 3 / 0	0 × 4 / 0	0 × 5 / 0	0 × 6 / 0	0 × 7 / 0	0 × 8 / 0	0 × 9 / 0	0 × 10 / 0
1	1 × 0 / 0	1 × 1 / 1	1 × 2 / 2	1 × 3 / 3	1 × 4 / 4	1 × 5 / 5	1 × 6 / 6	1 × 7 / 7	1 × 8 / 8	1 × 9 / 9	1 × 10 / 10
2	2 × 0 / 0	2 × 1 / 2	2 × 2 / 4	2 × 3 / 6	2 × 4 / 8	2 × 5 / 10	2 × 6 / 12	2 × 7 / 14	2 × 8 / 16	2 × 9 / 18	2 × 10 / 20
3	3 × 0 / 0	3 × 1 / 3	3 × 2 / 6	3 × 3 / 9	3 × 4 / 12	3 × 5 / 15	3 × 6 / 18	3 × 7 / 21	3 × 8 / 24	3 × 9 / 27	3 × 10 / 30
4	4 × 0 / 0	4 × 1 / 4	4 × 2 / 8	4 × 3 / 12	4 × 4 / 16	4 × 5 / 20	4 × 6 / 24	4 × 7 / 28	4 × 8 / 32	4 × 9 / 36	4 × 10 / 40
5	5 × 0 / 0	5 × 1 / 5	5 × 2 / 10	5 × 3 / 15	5 × 4 / 20	5 × 5 / 25	5 × 6 / 30	5 × 7 / 35	5 × 8 / 40	5 × 9 / 45	5 × 10 / 50
6	6 × 0 / 0	6 × 1 / 6	6 × 2 / 12	6 × 3 / 18	6 × 4 / 24	6 × 5 / 30	6 × 6 / 36	6 × 7 / 42	6 × 8 / 48	6 × 9 / 54	6 × 10 / 60
7	7 × 0 / 0	7 × 1 / 7	7 × 2 / 14	7 × 3 / 21	7 × 4 / 28	7 × 5 / 35	7 × 6 / 42	7 × 7 / 49	7 × 8 / 56	7 × 9 / 63	7 × 10 / 70
8	8 × 0 / 0	8 × 1 / 8	8 × 2 / 16	8 × 3 / 24	8 × 4 / 32	8 × 5 / 40	8 × 6 / 48	8 × 7 / 56	8 × 8 / 64	8 × 9 / 72	8 × 10 / 80
9	9 × 0 / 0	9 × 1 / 9	9 × 2 / 18	9 × 3 / 27	9 × 4 / 36	9 × 5 / 45	9 × 6 / 54	9 × 7 / 63	9 × 8 / 72	9 × 9 / 81	9 × 10 / 90
10	10 × 0 / 0	10 × 1 / 10	10 × 2 / 20	10 × 3 / 30	10 × 4 / 40	10 × 5 / 50	10 × 6 / 60	10 × 7 / 70	10 × 8 / 80	10 × 9 / 90	10 × 10 / 100

Legend:

- Zero facts (× 0)
- Ones facts (× 1)
- Doubles facts (× 2)
- Doubles Plus One Set facts (× 3)
- Double-Doubles facts (× 4)
- Half-Tens facts (× 5)
- Half-Tens Plus One Set facts (× 6)
- Double-Double-Doubles facts (× 8)
- Tens Minus One Set facts (× 9)
- Tens facts (× 10)

Work Places

1F Rabbit Tracks

1G Target One Hundred

1H Anything But Five

2A Loops and Groups

2B Frog Jump Multiplication

2C Cover Up

Daily Practice

SB 62 Multiplication Patterns