Unit 2 Module 3 Session 3

Problem String- Doubles and More

Problems and Investigations-Multiplication Table, Part 1

Getting Ready-

- ™ T2 Grid Paper
- ™ T3 Doubles and More problem String
- SB 57 Multiplication Table
- Student Math Journals
- Red, Orange, and Brown Colored Pencils (class set)

Vocabulary

Equation

Commutative property of multiplication

Multiple

Product

- Interpret products of whole numbers
- Multiply using the commutative property
- Fluently multiply with products to 100 using strategies
- Identify patterns in the multiplication table

Problem String Doubles & More

Today’s Date:

1) Students set out 2 rows of 6 chairs. How many chairs did they set out?

2×6

Sample Strategies

2) The teacher suggested that instead of 2 rows of chairs, they should have 4 rows. If they add 2 more rows, how many chairs will they have?

4×6

Sample Strategies

3) 8 × 6

Sample Strategies

4) 3×6

Sample Strategies

5) 2×7

Sample Strategies

6) 4×7

Sample Strategies

7) 8×7

Sample Strategies

8) 3×7

Sample Strategies

How can doubling help when multiplying by 4?

How can doubling help when multiplying by 8?

How can doubling help when multiplying by 3?

WORKBOOK
PAGE 57 PLEASE

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 Double-Doubles facts
(x4) **red**

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 Double-Doubles facts
(x4) **red**

We will color the Doubles Plus One facts
(x3) **orange**

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 Doubles Plus One facts (x3) **orange**

We will color the Double-Double-Doubles facts (x8) **brown**

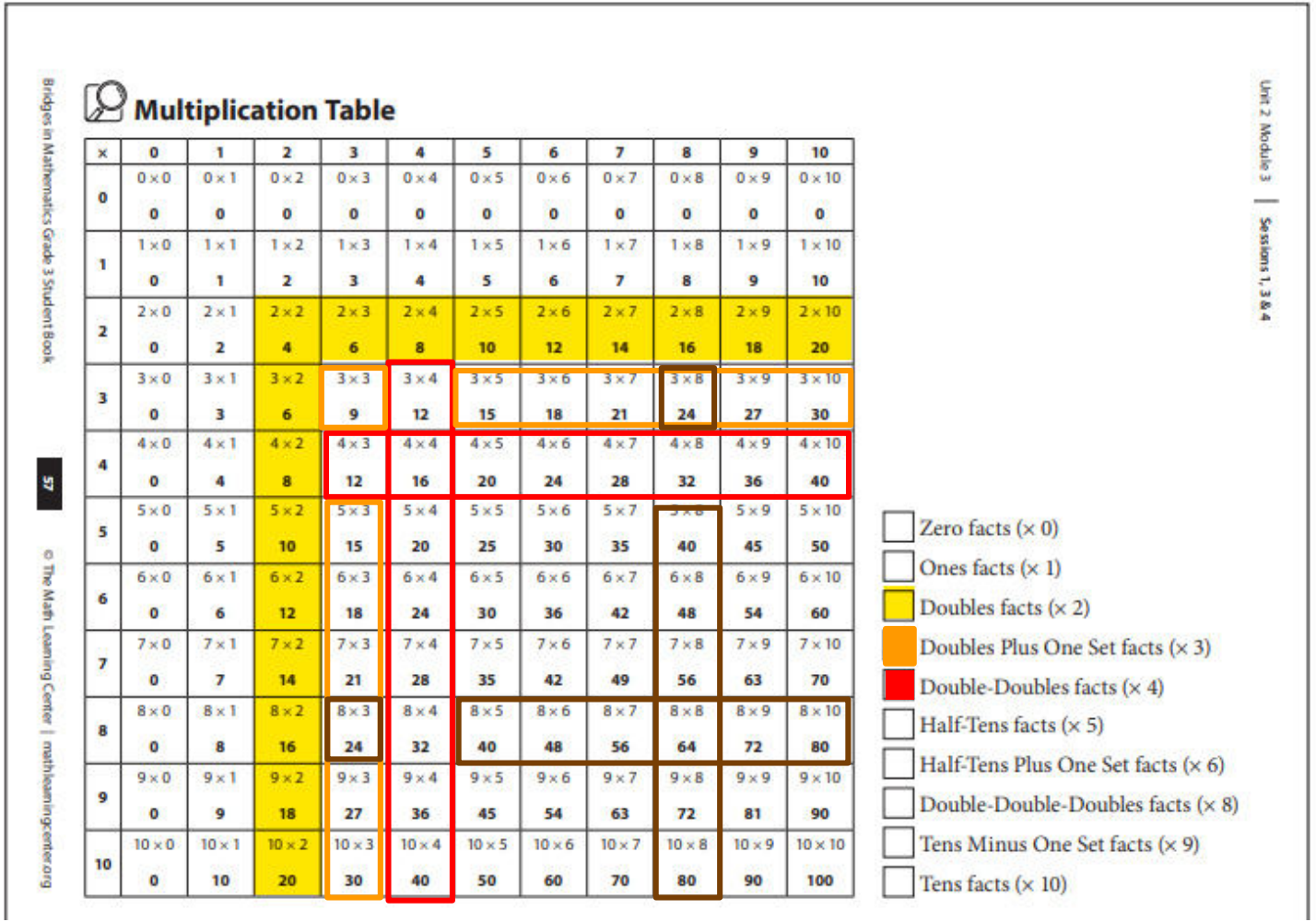
Multiplication Table

×	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 Double-Double-Doubles facts (x8) **brown**

More Facts in the next lesson!!



Bridges in Mathematics Grade 3 Student Book

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)

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 61 Array Challenges

Home Connection

HC 33-34 Mixed Practice