

MULTIPLICATION

M-1	x0's, 1's
M-2L	x2's loaded
M-2C	x2's cumulative
M-3L	x3's loaded
M-3C	x3's cumulative
M-4L	x4's loaded
M-4C	x4's cumulative
M-5L	x5's loaded
M-5C	x5's cumulative
M-6L	x6's loaded
M-6C	x6's cumulative
M-7L	x7's loaded
M-7C	x7's cumulative
M-8L	x8's loaded
M-8C	x8's cumulative
M-9L	x9's loaded
M-9C	x9's cumulative*
M-9M	Mastery*
M-9Ma	Mastery - Horizontal
M-10	Add, Subtract, Multiply Facts
M-11	2d x 1d, 2d x 2d (no reg.)
M-11a	2d x 1d (no reg.)
M-11b	2d x 2d (no reg.)
M-12	2d x 1d, 2d x 2d (w/reg.)
M-12a	2d x 1d (w/reg.)

On loaded sheets every other item is the new fact. For example, on M-2L, every other item is x2 and the other items are x1, x0.

M-12b	2d x 2d (w/reg.)
M-13	2d x 1d, 2d x 2d (no reg. & reg.)
M-14	3d x 1d, 3d x 2d (no reg.)*
M-15	3d x 1d, 3d x 2d (w/reg.)*
M-15a	3d x 1d (w/reg.)*
M-15b	3d x 2d (w/reg.)*
M-16	3d x 1d, 3d x 2d (no reg. & reg.)*
M-17	3d x 3d, 4d x 4d (w/reg.)
M-18	Multi-digit nos. (no reg. & reg.)



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see-write

M-1

(X 0's, 1's)

4	8	2	0	6	9	7	0	3	0	0	1	1	0	3	0
<u>x0</u>	<u>x0</u>	<u>x1</u>	<u>x9</u>	<u>x1</u>	<u>x0</u>	<u>x1</u>	<u>x0</u>	<u>x1</u>	<u>x4</u>	<u>x2</u>	<u>x6</u>	<u>x4</u>	<u>x6</u>	<u>x1</u>	<u>x8</u>

(16)

1	5	1	1	0	1	5	1	1	3	0	1	0	4	0	1
<u>x0</u>	<u>x0</u>	<u>x3</u>	<u>x8</u>	<u>x3</u>	<u>x0</u>	<u>x1</u>	<u>x1</u>	<u>x9</u>	<u>x0</u>	<u>x7</u>	<u>x2</u>	<u>x5</u>	<u>x1</u>	<u>x1</u>	<u>x5</u>

(32)

6	1	5	1	9	0	1	5	0	7	7	5	0	1	3	6
<u>x0</u>	<u>x3</u>	<u>x1</u>	<u>x6</u>	<u>x1</u>	<u>x8</u>	<u>x1</u>	<u>x0</u>	<u>x9</u>	<u>x0</u>	<u>x1</u>	<u>x1</u>	<u>x6</u>	<u>x7</u>	<u>x1</u>	<u>x1</u>

(48)

8	0	3	1	0	1	1	9	4	1	2	0	0	2	0	0
<u>x1</u>	<u>x0</u>	<u>x0</u>	<u>x0</u>	<u>x7</u>	<u>x2</u>	<u>x4</u>	<u>x0</u>	<u>x1</u>	<u>x9</u>	<u>x1</u>	<u>x2</u>	<u>x5</u>	<u>x0</u>	<u>x4</u>	<u>x1</u>

(64)

7	6	9	3	1	0	0	0	2	3	0	0	1	1	0	1
<u>x1</u>	<u>x0</u>	<u>x1</u>	<u>x0</u>	<u>x0</u>	<u>x8</u>	<u>x5</u>	<u>x2</u>	<u>x1</u>	<u>x1</u>	<u>x1</u>	<u>x6</u>	<u>x2</u>	<u>x8</u>	<u>x9</u>	<u>x5</u>

(80)



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M-2L

see-write

(thru x 2's)

1	5	9	2	0	2	4	6	0	2	0	4	1	3	8	2
x8	x2	x1	x2	x2	x9	x1	x2	x9	x8	x6	x2	x4	x2	x0	x4

(20)

0	2	0	9	1	0	9	7	5	2	0	1	5	2	0	2
x0	x1	x5	x2	x6	x2	x0	x2	x1	x6	x4	x2	x0	x5	x3	x7

(41)

1	2	0	2	0	1	7	2	2	2	6	9	2	0	7	7
x7	x2	x7	x5	x8	x2	x0	x2	x0	x1	x1	x2	x1	x2	x1	x2

(60)

0	2	1	2	1	6	8	2	0	3	1	2	3	2	4	5
x1	x0	x5	x9	x9	x2	x1	x8	x0	x2	x2	x4	x1	x7	x0	x2

(81)

6	2	0	1	1	2	2	2	1	4	5	2	7	2	1	2
x0	x3	x9	x2	x7	x5	x1	x3	x1	x2	x1	x0	x0	x9	x6	x1

(99)



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M-2C

see-write

(thru X 2's)

3 6 4 0 1 6 0 8 7 2 3 5 0 1 1 1
x2 x1 x1 x0 x6 x2 x6 x0 x1 x3 x1 x1 x9 x0 x3 x2

17

2 3 2 2 2 1 2 7 5 0 9 4 0 5 2 1
x1 x0 x0 x4 x6 x2 x5 x2 x0 x5 x2 x2 x3 x2 x4 x8

38

1 0 1 1 0 2 4 2 9 0 1 2 0 9 1 2
x4 x7 x7 x1 x2 x7 x0 x2 x0 x8 x5 x0 x2 x0 x9 x4

55

9 4 0 1 0 6 6 0 1 0 0 2 1 7 2 4
x1 x2 x8 x2 x4 x2 x0 x0 x4 x5 x2 x8 x7 x2 x3 x0

74

8 1 0 2 0 5 2 0 6 3 1 7 1 3 6 1
x1 x6 x7 x7 x9 x2 x1 x2 x0 x1 x9 x1 x6 x2 x1 x3

92



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see-write

M-3L

(thru X 3's)

9 1 8 5 1 2 5 9 3 6 3 8 3 1 4 0
X3 X5 X3 X1 X3 X1 X3 X2 X4 X2 X2 X1 X3 X2 X3 X8
 (23)

3 9 6 1 3 1 7 2 3 2 3 3 3 0 2 7
X6 X1 X3 X1 X9 X7 X3 X9 X8 X8 X6 X1 X7 X4 X3 X2
 (49)

3 2 5 2 7 9 2 3 8 4 1 2 3 1 6 2
X8 X6 X3 X7 X3 X0 X3 X2 X3 X2 X3 X2 X7 X3 X3 X1
 (73)

3 4 4 8 3 0 3 1 3 1 9 0 3 5 6 3
X9 X1 X3 X0 X4 X9 X3 X3 X5 X0 X3 X0 X2 X3 X0 X2
 (95)

8 3 5 4 6 3 0 9 0 3 2 7 1 3 5 3
X2 X8 X2 X3 X1 X5 X2 X3 X6 X9 X1 X3 X5 X6 X1 X4
 (121)



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M-3C

(thru X 3's)

9 0 2 0 1 3 1 6 3 3 1 7 1 3 3 6
x1 x3 x9 x4 x3 x0 x3 x1 x2 x4 x6 x1 x9 x1 x6 x0
 (19)

5 3 0 2 0 1 9 8 3 0 4 7 2 7 1 2
x2 x9 x9 x7 x7 x6 x3 x1 x0 x1 x0 x3 x3 x2 x7 x8
 (42)

0 1 0 4 6 6 0 1 3 0 4 9 1 3 7 2
x5 x4 x0 x3 x0 x2 x4 x2 x8 x8 x2 x1 x2 x7 x0 x4
 (62)

3 0 2 1 0 5 9 2 4 2 7 2 0 1 1 0
x2 x2 x0 x5 x8 x3 x0 x2 x0 x2 x3 x3 x2 x1 x7 x7
 (80)

2 0 1 3 2 5 0 4 6 9 0 5 7 8 2 1
x1 x1 x8 x3 x4 x2 x3 x2 x3 x2 x3 x0 x2 x3 x5 x2
 (102)



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M-4L
(thru X 4's)

see-write

1 0 3 9 4 3 5 2 7 4 8 9 9 4 1 2
x4 x8 x4 x3 x4 x4 x5 x2 x4 x2 x4 x4 x1 x4 x3 x4
x4 x4 x4 x4 x4 x4 x4 x4 x4 x4 x4 x4 x4 x4 x4 x4
(26)

4 2 4 6 4 4 4 1 4 4 4 5 4 3 6 2
x3 x1 x4 x4 x0 x5 x4 x2 x7 x0 x8 x0 x9 x9 x4 x3
(51)

4 6 6 3 4 5 8 3 4 7 4 2 4 3 4 8
x7 x1 x4 x2 x9 x1 x4 x1 x6 x3 x8 x6 x3 x6 x2 x3
(78)

4 1 2 2 4 0 4 5 9 1 7 9 5 1 4 0
x5 x3 x4 x1 x4 x7 x1 x3 x4 x8 x4 x2 x4 x4 x4 x5
(102)

4 3 4 2 3 2 9 1 8 1 7 0 4 8 4 5
x9 x7 x8 x7 x4 x3 x4 x2 x4 x6 x4 x1 x6 x1 x4 x2
(129)



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see-write

M-4C
 (thru X 4's)

3 5 0 5 4 1 1 1 2 4 3 2 2 3 9 2
x1 x1 x9 x3 x4 x0 x3 x2 x9 x1 x7 x8 x1 x0 x4 x0
 (22)

2 3 1 2 8 7 6 5 0 9 6 4 4 0 5 2
x6 x4 x2 x5 x3 x2 x4 x0 x3 x2 x3 x7 x2 x3 x2 x4
 (48)

1 0 2 4 1 3 0 1 4 1 0 2 2 8 2 4
x8 x1 x1 x9 x4 x1 x7 x7 x6 x1 x2 x3 x7 x4 x2 x0
 (68)

7 5 0 1 2 4 0 3 9 1 6 2 7 3 1 7
x4 x3 x8 x5 x0 x4 x2 x2 x0 x9 x4 x4 x0 x7 x2 x4
 (90)

0 3 9 1 0 6 3 4 0 0 1 0 4 0 3 2
x8 x8 x4 x2 x4 x2 x0 x4 x3 x0 x4 x5 x9 x2 x5 x8
 (114)



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M-5C

see-write

(thru X 5's)

2	5	3	8	5	0	2	0	1	5	4	9	8	3	5	0	25	25
x1	x2	x9	x4	x3	x9	x7	x4	x6	x2	x7	x3	x1	x0	x7	x1		
7	1	2	7	4	1	5	2	3	0	4	5	0	1	0	4	50	50
x3	x5	x3	x2	x8	x7	x8	x8	x5	x2	x9	x4	x5	x4	x0	x3		
6	6	0	7	1	9	3	0	4	4	9	7	1	8	3	7	75	75
x0	x2	x4	x5	x2	x4	x8	x8	x5	x3	x1	x4	x2	x5	x7	x0		
2	1	9	3	0	6	4	3	1	0	5	5	7	9	2	5	97	97
x5	x9	x0	x2	x2	x5	x4	x0	x5	x8	x1	x3	x4	x0	x2	x9		
8	2	9	2	0	1	4	3	1	0	3	1	5	4	2	0	121	121
x4	x7	x5	x5	x2	x1	x6	x5	x7	x7	x1	x4	x6	x9	x1	x1		



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M-5L
 (thru X 5's)

see-write

5 3 1 3 5 3 2 3 5 7 3 3 8 0 5 1
 x7 2 x5 x4 x6 x4 x5 x1 x3 x3 x5 x3 x5 x3 x2 x2
 (27)

5 2 5 0 9 8 6 7 5 5 5 4 4 2 5 7
 x9 7 x8 x5 x5 x3 x5 x4 x5 x0 x1 x1 x5 x3 x4 x0
 (53)

7 3 9 3 6 7 8 3 1 3 3 5 5 2 2
 x5 7 x5 x6 x5 x2 x5 x8 x5 x9 x5 x0 x1 x4 x5 x1
 (91)

2 4 5 4 4 4 5 1 5 1 5 0 5 1 9 1
 x5 9 x6 x7 x5 x1 x5 x8 x7 x3 x8 x1 x4 x6 x5 x2
 (117)

1 0 2 8 7 2 5 4 5 9 5 9 5 8 1
 x5 4 x5 x4 x5 x6 x2 x8 x4 x2 x3 x4 x1 x0 x5 x4
 (144)



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M-6L
 (thru X 6's)

see-write

7	6	5	6	2	6	3	5	2	4	8	6	2	6	5	1
x5	x3	x1	x8	x2	x1	x2	x6	x9	x6	x5	x0	x8	x5	x6	x6

(26)

2	6	5	6	2	3	3	0	4	6	6	6	7	6	4	8
x1	x2	x5	x7	x7	x6	x4	x6	x8	x6	x5	x9	x2	x4	x4	x6

(56)

4	9	0	6	4	6	5	6	2	7	5	6	9	6	5	6
x2	x6	x2	x0	x3	x8	x2	x5	x6	x6	x4	x7	x5	x4	x7	x9

(85)

9	4	3	6	2	5	2	6	5	2	8	9	5	6	3	6
x2	x6	x5	x3	x3	x6	x4	x1	x4	x6	x4	x6	x9	x2	x3	x6

(114)

0	1	4	0	3	0	2	1	3	5	3	6	4	6	5	4
x3	x6	x5	x6	x9	x6	x5	x6	x4	x6	x8	x2	x6	x3	x3	x6

(141)



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M-6C

see-write

(thru X 6's)

6 8 5 2 6 2 4 5 4 9 5 4 2 6 9 6
x4 x5 x4 x4 x8 x0 x6 x2 x7 x2 x5 x3 x3 x5 x4 x2
 (29)

3 3 0 5 7 6 4 3 5 4 2 1 3 3 2 4
x6 x8 x4 x6 x5 x3 x7 x1 x8 x0 x6 x4 x2 x9 x4 x6
 (55)

5 2 3 0 8 9 6 1 3 3 4 6 0 2 9 2
x7 x6 x5 x4 x4 x5 x3 x4 x2 x9 x3 x5 x5 x1 x2 x5
 (82)

5 2 5 6 6 4 6 3 6 4 5 4 5 3 5 0
x5 x3 x3 x2 x3 x2 x2 x0 x8 x3 x3 x6 x1 x6 x9 x3
 (110)

5 4 3 5 6 1 2 3 4 8 2 8 3 2 9 1
x4 x5 x6 x6 x4 x5 x5 x5 x9 x6 x3 x5 x8 x0 x6 x2
 (138)



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M-7L

see-write

(thru X 7's)

3 7 5 7 9 7 7 8 7 2 9 1 7 3 7 9
X2 X3 X3 X2 X2 X5 X7 X6 X1 X4 X7 X4 X4 X5 X2
 (28)

6 7 4 7 3 5 2 8 9 4 6 0 5 3 6 4
X9 X8 X1 X9 X2 X6 X7 X4 X7 X2 X4 X7 X1 X7 X3 X7
 (55)

3 7 2 7 2 5 2 6 1 7 6 3 5 7 4 6
X6 X6 X6 X7 X3 X7 X6 X7 X3 X0 X2 X7 X3 X5 X5 X7
 (84)

9 8 6 7 3 7 3 7 7 9 6 4 1 8 5 9
X5 X7 X2 X6 X6 X7 X8 X0 X4 X7 X8 X3 X7 X5 X7 X4
 (114)

7 4 7 6 7 4 2 7 7 3 0 5 7 5 6 0
X7 X6 X9 X5 X2 X5 X7 X5 X1 X3 X7 X6 X3 X6 X7 X5
 (142)



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see-write

M-7C

(thru X 7's)

7 2 4 7 3 6 9 3 1 0 1 9 2 3 7 8
 x4 x6 x5 x2 x7 x4 x4 x3 x3 x7 x7 x6 x0 x8 x1 x5
 (26)

4 7 3 2 1 6 2 5 3 4 5 7 7 3 7 0
 x9 x0 x5 x5 x5 x4 x7 x6 x6 x5 x4 x5 x6 x4 x3 x3
 (54)

3 5 4 5 5 4 6 3 4 6 4 6 6 8 5 2
 x6 x1 x6 x7 x3 x3 x8 x0 x7 x2 x2 x3 x2 x7 x3 x3
 (82)

7 6 2 9 2 7 0 6 4 3 7 3 1 3 6 9
 x4 x9 x5 x2 x1 x6 x5 x5 x3 x9 x8 x8 x4 x2 x3 x5
 (110)

0 3 2 7 5 3 4 9 6 4 2 3 3 1 1 2
 x4 x5 x6 x9 x7 x1 x1 x3 x7 x6 x4 x4 x2 x7 x4 x6
 (135)



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M-8L

see-write

(thru X 8's)

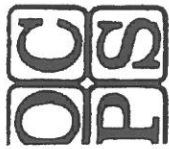
3 8 3 9 5 6 9 8 2 8 9 3 3 1 5 8
 x8 x8 x4 x8 x8 x2 x1 x7 x6 x4 x8 x2 x8 x1 x0
 (27)

6 8 2 7 8 4 0 3 8 2 8 6 8 7 8
 x5 x3 x2 x6 x7 x0 x8 x5 x9 x3 x2 x5 x0 x4
 (55)

7 4 2 8 7 8 3 8 5 8 2 6 2 0 5 8
 x4 x8 x6 x1 x3 x4 x9 x7 x4 x6 x7 x8 x5 x9 x3
 (85)

4 9 9 8 3 3 8 2 7 7 3 8 5 9 8
 x1 x8 x5 x2 x8 x7 x8 x5 x8 x9 x0 x3 x8 x3 x2
 (113)

5 4 1 1 6 8 8 8 5 8 0 4 4 0 7 7
 x6 x8 x4 x2 x6 x5 x4 x3 x3 x5 x8 x6 x8 x5 x8
 (141)



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M-8C

(thru x 8's)

4 2 6 2 4 9 6 8 1 8 7 3 3 0 8 5
x3 x3 x5 x7 x8 x4 x2 x4 x3 x0 x7 x6 x8 x4 x3 x6
 (28)

6 8 4 3 7 5 8 4 2 1 1 8 3 3 2 4
x3 x4 x7 x1 x3 x8 x7 x0 x6 x4 x7 x6 x2 x9 x4 x6
 (54)

9 4 3 5 5 7 2 3 6 0 8 7 8 9 6 3
x3 x1 x1 x8 x7 x9 x6 x5 x8 x4 x4 x2 x8 x5 x3 x2
 (82)

3 7 3 4 0 6 0 7 2 8 9 2 6 7 9 5
x8 x8 x9 x3 x8 x5 x5 x6 x1 x9 x2 x5 x9 x4 x8 x4
 (111)

5 7 8 6 6 4 2 6 4 3 6 8 4 5 5 4
x3 x8 x7 x2 x3 x2 x8 x2 x7 x0 x8 x1 x3 x3 x7 x6
 (140)



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see-write

M-9L

(thru X 9's)

8 3 6 4 4 9 5 2 0 7 6 0 5 5 2 9
 x4 x9 x3 x9 x7 x9 x7 x9 x4 x9 x5 x9 x6 x9 x8 x8
 (30)

8 9 2 1 5 9 9 9 2 8 5 9 6 6 1 7
 x2 x7 x3 x9 x9 x2 x3 x0 x3 x9 x8 x5 x2 x9 x3 x3
 (57)

9 1 0 3 9 8 7 0 9 9 1 7 9 3 9 4
 x5 x4 x9 x8 x9 x7 x9 x8 x1 x7 x9 x5 x6 x7 x3
 (84)

3 9 3 3 5 4 8 6 8 9 8 2 1 9
 x5 x2 x1 x9 x2 x9 x2 x9 x9 x6 x3 x9 x8 x4
 (112)

2 9 7 9 9 3 5 8 6 1 4 6 0 5 8 9
 x5 x0 x6 x7 x5 x9 x4 x9 x8 x9 x7 x9 x4 x9 x5 x0
 (140)



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M-9C

see-write

(thru X 9's)*

7 7 0 3 9 7 5 3 5 9 8 4 5 5 8 4
 x6 x3 x8 x8 x8 x7 x9 x6 x1 x0 x5 x6 x7 x3 x9 x3

(29)

3 5 4 6 2 4 1 6 6 8 7 6 5 2 5 5
 x0 x9 x7 x2 x8 x2 x9 x3 x2 x7 x8 x9 x3 x3 x3 x4

(57)

7 6 2 4 9 8 2 7 0 0 6 4 9 3 7
 x4 x9 x5 x9 x2 x9 x1 x6 x9 x5 x8 x3 x1 x9 x8

(84)

9 1 3 6 9 8 7 7 8 0 9 6 3 2 7 3
 x7 x4 x2 x3 x5 x2 x8 x2 x4 x4 x6 x8 x5 x6 x9

(113)

3 4 9 9 6 8 4 7 2 3 8 9 1 1 2
 x1 x1 x9 x3 x7 x2 x2 x9 x6 x9 x3 x7 x4 x4 x6

(139)



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see-write

M-9M
 (Mastery)*

7 5 1 9 6 6 7 2 7 5 6 7 0 9 3 8
 x6 x7 x9 x8 x5 x3 x9 x4 x3 x3 x3 x4 x8 x5 x9 x6

29

6 4 9 5 3 3 4 8 2 9 8 5 8 9 8 7
 x9 x3 x2 x5 x2 x8 x4 x7 x5 x1 x8 x4 x6 x4 x1 x8

58

7 3 9 7 6 6 9 7 8 6 1 5 9 5 8 3
 x2 x1 x3 x7 x8 x2 x9 x5 x4 x9 x7 x9 x2 x9 x3

87

1 3 4 2 8 1 9 9 2 9 4 5 7 9 6 6
 x4 x6 x7 x3 x8 x8 x6 x4 x6 x0 x8 x6 x7 x5 x7 x7

115

2 5 3 9 3 8 4 4 4 2 3 2 8 6 4 2
 x8 x4 x9 x7 x5 x2 x3 x6 x2 x9 x7 x7 x5 x4 x0 x2

144



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see-write

M-9Ma

Mastery-Horizontal*

$8 \times 6 = \underline{\quad}$ $3 \times 9 = \underline{\quad}$ $9 \times 5 = \underline{\quad}$ $0 \times 8 = \underline{\quad}$ $7 \times 4 = \underline{\quad}$ $6 \times 3 = \underline{\quad}$ $5 \times 3 = \underline{\quad}$ $2 \times 4 = \underline{\quad}$ 14

$7 \times 3 = \underline{\quad}$ $7 \times 9 = \underline{\quad}$ $6 \times 3 = \underline{\quad}$ $6 \times 5 = \underline{\quad}$ $9 \times 8 = \underline{\quad}$ $1 \times 9 = \underline{\quad}$ $5 \times 7 = \underline{\quad}$ $7 \times 6 = \underline{\quad}$ 29

$7 \times 8 = \underline{\quad}$ $8 \times 1 = \underline{\quad}$ $9 \times 4 = \underline{\quad}$ $8 \times 6 = \underline{\quad}$ $5 \times 8 = \underline{\quad}$ $2 \times 5 = \underline{\quad}$ $8 \times 8 = \underline{\quad}$ $2 \times 5 = \underline{\quad}$ 44

$8 \times 7 = \underline{\quad}$ $4 \times 4 = \underline{\quad}$ $3 \times 8 = \underline{\quad}$ $3 \times 2 = \underline{\quad}$ $5 \times 5 = \underline{\quad}$ $9 \times 2 = \underline{\quad}$ $4 \times 3 = \underline{\quad}$ $6 \times 9 = \underline{\quad}$ 59

$3 \times 3 = \underline{\quad}$ $8 \times 9 = \underline{\quad}$ $5 \times 2 = \underline{\quad}$ $9 \times 9 = \underline{\quad}$ $5 \times 9 = \underline{\quad}$ $1 \times 7 = \underline{\quad}$ $6 \times 9 = \underline{\quad}$ $8 \times 4 = \underline{\quad}$ 73

$7 \times 5 = \underline{\quad}$ $9 \times 9 = \underline{\quad}$ $6 \times 2 = \underline{\quad}$ $6 \times 8 = \underline{\quad}$ $7 \times 7 = \underline{\quad}$ $9 \times 3 = \underline{\quad}$ $3 \times 1 = \underline{\quad}$ $7 \times 2 = \underline{\quad}$ 88

$6 \times 7 = \underline{\quad}$ $6 \times 6 = \underline{\quad}$ $9 \times 7 = \underline{\quad}$ $7 \times 5 = \underline{\quad}$ $5 \times 6 = \underline{\quad}$ $4 \times 8 = \underline{\quad}$ $9 \times 0 = \underline{\quad}$ $2 \times 6 = \underline{\quad}$ 103

$9 \times 4 = \underline{\quad}$ $9 \times 6 = \underline{\quad}$ $1 \times 8 = \underline{\quad}$ $8 \times 8 = \underline{\quad}$ $2 \times 3 = \underline{\quad}$ $4 \times 7 = \underline{\quad}$ $3 \times 6 = \underline{\quad}$ $1 \times 4 = \underline{\quad}$ 116

$2 \times 2 = \underline{\quad}$ $4 \times 0 = \underline{\quad}$ $6 \times 4 = \underline{\quad}$ $8 \times 5 = \underline{\quad}$ $2 \times 7 = \underline{\quad}$ $3 \times 7 = \underline{\quad}$ $2 \times 9 = \underline{\quad}$ $4 \times 2 = \underline{\quad}$ 129



ORANGE COUNTY PUBLIC SCHOOLS
PRECISION TEACHING PROJECT

ORLANDO, FLORIDA

see-write

M-10

(Add, Sub, & Mult. Facts)

5 9 16 9 2 11 14 6 8 9 3 7 2 4 18
 $+8$ $+2$ -7 $\times 8$ $\times 6$ -8 -9 $\times 4$ $+7$ -6 $\times 2$ $+7$ -0 $+7$ -9

23

6 5 9 2 8 9 5 12 3 8 5 8 17 3 10
 $+8$ $\times 7$ $+6$ $+8$ $\times 9$ $+4$ $\times 6$ -4 $\times 0$ $\times 8$ $+4$ $\times 8$ -9 $\times 9$ -2

47

17 3 10 4 9 8 16 4 15 5 2 14 13 9 6
 -9 $\times 9$ -2 $+0$ $+8$ $\times 7$ -7 $\times 3$ -8 $+6$ $\times 1$ -8 -6 $+3$ $+4$

69

11 9 6 9 8 4 3 8 6 8 10 9 4 8 3
 -5 $\times 7$ $\times 8$ -3 $\times 4$ $+3$ $+8$ -2 $\times 9$ -2 -7 $\times 4$ $\times 7$ -5 $+2$

91

3 8 9 6 7 6 2 7 12 15 9 3 7 5
 $\times 6$ $+4$ -1 -2 $+2$ $\times 6$ $+7$ $\times 2$ $\times 8$ -8 -7 $\times 6$ $\times 7$ $+1$ $+5$

114



ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-11
 (2dx1d, 2dx2d, no reg.)
 see-write

81	21	92	74	63	83	92	86
<u>x 8</u>	<u>x26</u>	<u>x23</u>	<u>x 2</u>	<u>x 3</u>	<u>x32</u>	<u>x 4</u>	<u>x11</u>

26

72	12	31	52	32	42	20	81
<u>x34</u>	<u>x 4</u>	<u>x 7</u>	<u>x24</u>	<u>x14</u>	<u>x33</u>	<u>x 4</u>	<u>x 5</u>

51

51	13	41	91	43	71	57	81
<u>x 9</u>	<u>x23</u>	<u>x 6</u>	<u>x76</u>	<u>x21</u>	<u>x43</u>	<u>x 1</u>	<u>x 7</u>

76

61	58	41	11	60	53	23	24
<u>x99</u>	<u>x11</u>	<u>x44</u>	<u>x 8</u>	<u>x 9</u>	<u>x 2</u>	<u>x13</u>	<u>x 2</u>

100



ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-11a

(2dx1d, no reg.)

see-write

92	<u>x 4</u>	62	<u>x 4</u>	71	<u>x 7</u>	81	<u>x 9</u>	46	<u>x 1</u>	51	<u>x 8</u>	71	<u>x 9</u>	81	<u>x 8</u>	83	<u>x 3</u>	75	<u>x 0</u>	27
89	<u>x 1</u>	92	<u>x 4</u>	41	<u>x 8</u>	51	<u>x 9</u>	22	<u>x 3</u>	24	<u>x 2</u>	84	<u>x 2</u>	63	<u>x 3</u>	53	<u>x 1</u>	92	<u>x 2</u>	53
91	<u>x 7</u>	72	<u>x 2</u>	23	<u>x 3</u>	61	<u>x 7</u>	62	<u>x 3</u>	53	<u>x 2</u>	75	<u>x 1</u>	81	<u>x 7</u>	60	<u>x 9</u>	83	<u>x 1</u>	80
82	<u>x 4</u>	62	<u>x 4</u>	90	<u>x 9</u>	84	<u>x 2</u>	73	<u>x 3</u>	33	<u>x 3</u>	83	<u>x 2</u>	91	<u>x 8</u>	31	<u>x 7</u>	22	<u>x 4</u>	108
88	<u>x 1</u>	81	<u>x 5</u>	54	<u>x 2</u>	57	<u>x 0</u>	78	<u>x 1</u>	41	<u>x 7</u>	96	<u>x 0</u>	72	<u>x 3</u>	65	<u>x 0</u>	52	<u>x 4</u>	130



ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-11b

(2dx2d no reg.)

see-write

43	13	21	32	92	44	34	21
<u>x22</u>	<u>x23</u>	<u>x26</u>	<u>x44</u>	<u>x23</u>	<u>x12</u>	<u>x12</u>	<u>x14</u>
72	61	70	58	22	33	34	19
<u>x41</u>	<u>x99</u>	<u>x43</u>	<u>x11</u>	<u>x33</u>	<u>x23</u>	<u>x12</u>	<u>x11</u>
61	81	51	71	60	29	42	61
<u>x76</u>	<u>x71</u>	<u>x66</u>	<u>x43</u>	<u>x39</u>	<u>x11</u>	<u>x31</u>	<u>x77</u>
84	92	72	22	54	82	41	30
<u>x12</u>	<u>x43</u>	<u>x34</u>	<u>x11</u>	<u>x22</u>	<u>x13</u>	<u>x14</u>	<u>x65</u>

26

53

84

110



ORANGE COUNTY PUBLIC SCHOOLS
PRECISION TEACHING PROJECT
ORLANDO, FLORIDA

M-12

(2dx1d, 2dx2d w/reg.)

see-write

43	68	28	36	78	45	28	83
<u>x26</u>	<u>x 4</u>	<u>x75</u>	<u>x14</u>	<u>x 6</u>	<u>x 3</u>	<u>x18</u>	<u>x89</u>
74	19	94	57	87	92	53	68
<u>x36</u>	<u>x 9</u>	<u>x 4</u>	<u>x 7</u>	<u>x38</u>	<u>x 9</u>	<u>x72</u>	<u>x45</u>
15	88	57	85	46	32	77	63
<u>x 7</u>	<u>x 6</u>	<u>x 8</u>	<u>x92</u>	<u>x34</u>	<u>x 9</u>	<u>x 2</u>	<u>x73</u>
24	22	55	96	67	45	93	28
<u>x56</u>	<u>x89</u>	<u>x 5</u>	<u>x 8</u>	<u>x39</u>	<u>x 8</u>	<u>x 7</u>	<u>x38</u>

27

55

82

110



ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-12a
 (2dx1d, w/reg.)

see-write

27	88	22	64	46	35	15	48	84	74	56	33
<u>x6</u>	<u>x9</u>	<u>x7</u>	<u>x9</u>	<u>x3</u>	<u>x9</u>	<u>x7</u>	<u>x5</u>	<u>x3</u>	<u>x4</u>	<u>x7</u>	
74	87	99	88	44	46	36	73	27	68	25	65
<u>x9</u>	<u>x3</u>	<u>x2</u>	<u>x2</u>	<u>x3</u>	<u>x5</u>	<u>x9</u>	<u>x6</u>	<u>x8</u>	<u>x4</u>	<u>x3</u>	
84	79	45	56	65	77	52	44	19	24	94	98
<u>x6</u>	<u>x7</u>	<u>x8</u>	<u>x6</u>	<u>x9</u>	<u>x4</u>	<u>x5</u>	<u>x3</u>	<u>x9</u>	<u>x8</u>	<u>x4</u>	
48	85	67	55	28	57	33	29	59	74	85	131
<u>x8</u>	<u>x7</u>	<u>x7</u>	<u>x4</u>	<u>x3</u>	<u>x2</u>	<u>x6</u>	<u>x7</u>	<u>x8</u>	<u>x9</u>	<u>x5</u>	
38	42	58	82	63	98	27	74	36	56	48	164
<u>x6</u>	<u>x9</u>	<u>x9</u>	<u>x5</u>	<u>x4</u>	<u>x8</u>	<u>x6</u>	<u>x4</u>	<u>x9</u>	<u>x6</u>	<u>x8</u>	



ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-12b
 (2dx2d w/reg.)

see-write

67	54	27	38	49	45	47	32
<u>x58</u>	<u>x32</u>	<u>x43</u>	<u>x24</u>	<u>x54</u>	<u>x16</u>	<u>x24</u>	<u>x25</u>

28

67	83	67	67	82	98	29	28
<u>x63</u>	<u>x45</u>	<u>x35</u>	<u>x34</u>	<u>x73</u>	<u>x28</u>	<u>x46</u>	<u>x65</u>

56

46	36	28	37	96	37	83	78
<u>x82</u>	<u>x35</u>	<u>x37</u>	<u>x33</u>	<u>x78</u>	<u>x28</u>	<u>x67</u>	<u>x26</u>

84

58	58	54	85	33	47	64	97
<u>x23</u>	<u>x46</u>	<u>x78</u>	<u>x42</u>	<u>x57</u>	<u>x32</u>	<u>x54</u>	<u>x38</u>

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ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-13
 (2dx1d, 2dx2d, no reg. & reg.)
 see-write

46	87	52	91	63	73	26	51
<u>x 2</u>	<u>x46</u>	<u>x 7</u>	<u>x 6</u>	<u>x32</u>	<u>x 9</u>	<u>x33</u>	<u>x89</u>

26

48	71	34	93	62	48	78	46
<u>x57</u>	<u>x 8</u>	<u>x 5</u>	<u>x23</u>	<u>x 3</u>	<u>x 4</u>	<u>x66</u>	<u>x 6</u>

53

96	42	92	39	37	82	29	67
<u>x 2</u>	<u>x14</u>	<u>x 4</u>	<u>x 9</u>	<u>x95</u>	<u>x44</u>	<u>x95</u>	<u>x 5</u>

80

58	81	22	53	98	64	56	51
<u>x47</u>	<u>x 8</u>	<u>x34</u>	<u>x22</u>	<u>x 8</u>	<u>x37</u>	<u>x 9</u>	<u>x 8</u>

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ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-14
 (3dx1d, 3dx2d, no reg.)*

see-write

323	467	523	812	342	921	623
<u>X 3</u>	<u>X 11</u>	<u>X 3</u>	<u>X 24</u>	<u>X 2</u>	<u>X 4</u>	<u>X 21</u>
423	401	632	512	811	722	310
<u>X 12</u>	<u>X 7</u>	<u>X 31</u>	<u>X 43</u>	<u>X 66</u>	<u>X 4</u>	<u>X 3</u>
642	721	610	311	700	210	464
<u>X 2</u>	<u>X 34</u>	<u>X 6</u>	<u>X 5</u>	<u>X 9</u>	<u>X 98</u>	<u>X 22</u>
801	133	322	501	111	410	931
<u>X 9</u>	<u>X 3</u>	<u>X 42</u>	<u>X 6</u>	<u>X 28</u>	<u>X 17</u>	<u>X 3</u>



ORANGE COUNTY PUBLIC SCHOOLS
PRECISION TEACHING PROJECT
ORLANDO, FLORIDA

M-15

(3dx1d, 3dx2d, w/reg.)*

see-write

246	842	973	651	732	456	364
X <u>24</u>	X <u>3</u>	X <u>47</u>	X <u>82</u>	X <u>6</u>	X <u>51</u>	X <u>8</u>

31

975	198	258	567	394	638	717
X <u>6</u>	X <u>9</u>	X <u>7</u>	X <u>94</u>	X <u>63</u>	X <u>8</u>	X <u>75</u>

62

543	718	893	426	171	664	292
X <u>49</u>	X <u>39</u>	X <u>54</u>	X <u>2</u>	X <u>68</u>	X <u>4</u>	X <u>8</u>

93

672	385	692	246	137	555	426
X <u>5</u>	X <u>5</u>	X <u>9</u>	X <u>8</u>	X <u>73</u>	X <u>64</u>	X <u>37</u>

124



ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-15d

(3d X Id, w/reg.) *

see-write

396	835	447	626	396	696	663
<u>x5</u>	<u>x7</u>	<u>x6</u>	<u>x9</u>	<u>x3</u>	<u>x6</u>	<u>x5</u>

(32)

357	949	559	485	272	459	717
<u>x4</u>	<u>x4</u>	<u>x8</u>	<u>x7</u>	<u>x8</u>	<u>x3</u>	<u>x6</u>

(64)

358	597	748	685	918	268	886
<u>x5</u>	<u>x9</u>	<u>x5</u>	<u>x3</u>	<u>x7</u>	<u>x4</u>	<u>x3</u>

(96)

826	845	378	634	885	339	693
<u>x6</u>	<u>x7</u>	<u>x7</u>	<u>x9</u>	<u>x8</u>	<u>x9</u>	<u>x3</u>

(128)



ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-15b
 (3d X 2d, w/reg.)*

see-write

289
X32

523
X84

626
X56

485
X43

533
X44

156
X74

340
X13

(33)

935
X64

489
X26

778
X23

346
X39

223
X76

695
X47

473
X69

(68)

928
X67

895
X44

556
X46

687
X35

546
X52

834
X18

627
X75

(103)

337
X49

296
X32

896
X24

639
X48

982
X27

276
X20

549
X94

(136)



ORANGE COUNTY PUBLIC SCHOOLS
PRECISION TEACHING PROJECT
ORLANDO, FLORIDA

M-16

(3dx1d, 3dx2d, no reg. & reg.)*

see-write

916	777	871	641	332	413	526
<u>X 3</u>	<u>X 23</u>	<u>X 11</u>	<u>X 2</u>	<u>X 8</u>	<u>X 31</u>	<u>X 47</u>

31

767	912	511	212	800	756	381
<u>X 42</u>	<u>X 42</u>	<u>X 69</u>	<u>X 4</u>	<u>X 8</u>	<u>X 9</u>	<u>X 7</u>

61

503	653	641	819	601	722	893
<u>X 3</u>	<u>X 6</u>	<u>X 12</u>	<u>X 5</u>	<u>X 7</u>	<u>X 34</u>	<u>X 34</u>

89

713	947	498	539	482	223	721
<u>X 22</u>	<u>X 75</u>	<u>X 35</u>	<u>X 6</u>	<u>X 96</u>	<u>X 3</u>	<u>X 4</u>

120



ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-17
 (3dx3d, 4dx4d, w/reg.)

see-write

494	368	6803	5997	1283
<u>x325</u>	<u>x473</u>	<u>x2571</u>	<u>x2431</u>	<u>x2275</u>

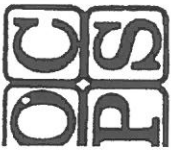
40

678	3924	8142	6937	506
<u>x346</u>	<u>x7865</u>	<u>x4352</u>	<u>x4395</u>	<u>x627</u>

82

723	5368	920	4753	3975
<u>x889</u>	<u>x2957</u>	<u>x716</u>	<u>x3741</u>	<u>x3974</u>

124



ORANGE COUNTY PUBLIC SCHOOLS
 PRECISION TEACHING PROJECT
 ORLANDO, FLORIDA

M-18

see-write

(Multi-digit nos. no reg. & reg.)

43	687	463	91	86	24	752
<u>x 3</u>	<u>x 21</u>	<u>x 11</u>	<u>x 23</u>	<u>x 5</u>	<u>x 66</u>	<u>x 829</u>
612						
<u>x 4</u>						
32						
463	4372	36	402	11	757	73
<u>x 97</u>	<u>x 2680</u>	<u>x 19</u>	<u>x 44</u>	<u>x 9</u>	<u>x 9</u>	<u>x 3</u>
24						
<u>x 21</u>						
65						
414	58	4372	728	75	96	498
<u>x 12</u>	<u>x 11</u>	<u>x 3427</u>	<u>x 5</u>	<u>x 38</u>	<u>x 8</u>	<u>x 35</u>
64						
<u>x 27</u>						
100						
312	921	723	803	23	358	692
<u>x 16</u>	<u>x 4</u>	<u>x 789</u>	<u>x 2</u>	<u>x 3</u>	<u>x 364</u>	<u>x 9</u>
246						
<u>x 9</u>						
134						