



Multiplying Whole Numbers

Explore – Answer Key

Part 1: Multiplication Chart

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



Debriefing Questions

1. List two or three patterns that you observed while making the multiplication chart.

Responses may vary, but may include:

- ***If you know your 3's you can double them to find the 6's.***
- ***If you know your 2's you can double them to find the 4's.***
- ***All the numbers in the 10's end with a zero.***
- ***The 5's row ends with 5, 0, 5, 0,... pattern.***
- ***The nines: the tens place increases by one and the ones place decreases by one all the way down.***

2. State which row is the easiest for you to learn and explain why.

Responses may vary, but may include:

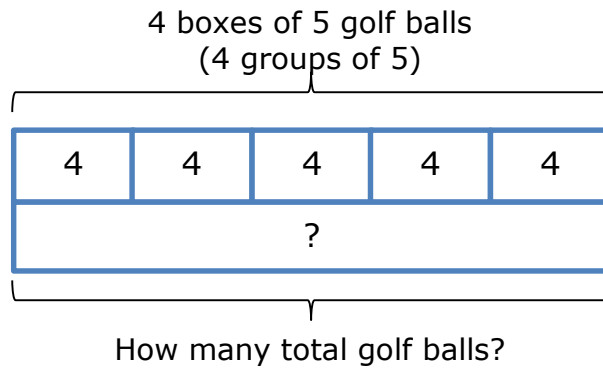
- ***2's because it is like counting by two's.***
- ***5's because I can count on my hands by 5.***
- ***10's because I know you just add a zero on the end.***



Part 2: Strip Diagrams

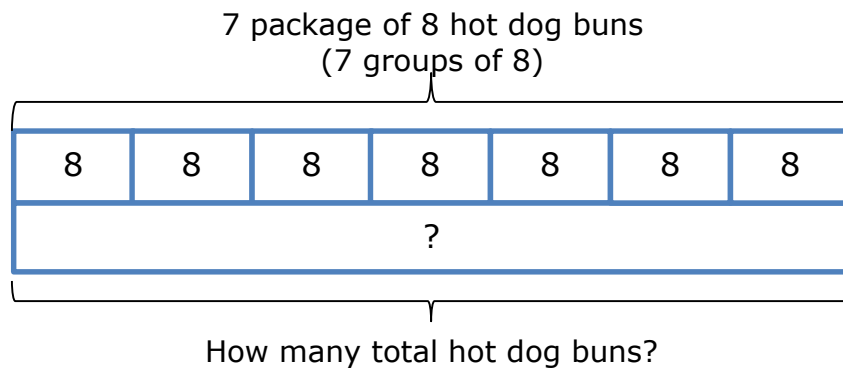
For each problem below, use a strip diagram to represent the problem. Then, use the strip diagram to write a number sentence. Use your multiplication chart or what you know about multiplication facts to solve the problem.

1. Each box contains 4 golf balls. Micah purchased 5 boxes of golf balls. How many golf balls did Micah purchase?



$$4 + 4 + 4 + 4 + 4 = 4 \times 5 = 20$$

2. A package of hot dog buns contains 8 buns. How many buns are there in 7 packages?



$$8 + 8 + 8 + 8 + 8 + 8 + 8 = 7 \times 8 = 56$$



Debriefing Questions

1. How is a strip diagram similar to repeated addition or skip counting?
How are they different?

Responses may vary, but may include:

- **Both a strip diagram and repeated addition/skip counting show the accumulation of numbers that are added over and over again.**
- **Repeated addition uses skip counting with numbers and a strip diagram uses skip counting with a length model.**

2. How does a strip diagram compare to a row in a multiplication chart?

Responses may vary, but may include:

- **A row in a multiplication chart shows a sequence of numbers that you get when you add the same number to itself over and over again. A strip diagram visually shows, using the length of a strip, how the same number can be added over and over again to generate a product.**

