

Lesson 3c: Multiplication with Powers of 10

Objective: Use mental math to multiply a number by a multiple of 10.

Complete on a separate sheet of paper and turn in to the basket.

Warm-up:

Evaluate:

1. 4×10
2. 9×5
3. 7×6
4. 3×30
5. Draw and divide a rectangle to show each product. Show the five steps.
 $8 \times 16 =$

Learn about It:

$$6 \times 528$$

Multiply the ones.
Regroup if necessary.
 $8 \times 6 = 48$

$$\begin{array}{r} 4 \\ 528 \\ \times 6 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 14 \\ 528 \\ \times 6 \\ \hline 68 \end{array}$$

$$\begin{array}{r} 14 \\ 528 \\ \times 6 \\ \hline 3168 \end{array}$$

Multiply the hundreds
Add any regrouped
hundreds
 $6 \times 5 = 30 + 1 = 31$

Multiply the tens.
Add any regrouped tens
Regroup if necessary.
 $6 \times 2 = 12 + 4 = 16$

Patterns in Multiples of 10

$$\begin{aligned} 8 \times 2 &= 16 \\ 8 \times 20 &= 160 \\ 8 \times 200 &= 1600 \\ 8 \times 2,000 &= 16,000 \end{aligned}$$

Watch Brainpop Video: multiplication

Practice: Complete in your journal

1. $84 \times 7 =$
2. $38 \times 9 =$
3. $41 \times 5 =$
4. $746 \times 3 =$
5. $507 \times 5 =$
6. $4,251 \times 8 =$
7. $7,645 \times 9 =$
8. $4,7775 \times 2 =$
9. $3,785,092 \times 2 =$
10. $93,007 \times 7 =$

Use a pattern or mental math to find each product.

1. $80 \times 4 =$
2. $400 \times 3 =$
3. $700 \times 7 =$
4. $88 \times 60 =$
5. $376 \times 20 =$

App on the iPad: iTooch math



Numbers and Operations

- #3 Multiplication & division
- #4 The multiplication algorithm
- #5 3-digit multiplier & zero handling

Homework: worksheet 3.5