

3rd Grade American Math HW 13

Chapter 12: Multiply by a 1-Digit Number

Dear Family,

During the next few weeks, our math class will be learning about multiplying by 1-digit whole numbers. We will investigate strategies for multiplying 2-, 3-, and 4-digit numbers by the numbers 2-9.

Here is a sample of how your child will be taught to multiply by a 1-digit number:

Model Multiply by a 1-Digit Number

This is one way we will be multiplying by 1-digit numbers.

Step 1

Multiply the tens.

Record.

$$\begin{array}{r} 26 \\ \times 3 \\ \hline 60 \end{array} \leftarrow 3 \times 2 \text{ tens} \\ = 6 \text{ tens}$$

Step 2

Multiply the ones.

Record.

$$\begin{array}{r} 26 \\ \times 3 \\ \hline 60 \\ 18 \end{array} \leftarrow 3 \times 6 \text{ ones} \\ = 18 \text{ ones}$$

Step 3

Add the partial products.

$$\begin{array}{r} 26 \\ \times 3 \\ \hline 60 \\ + 18 \\ \hline 78 \end{array}$$

Vocabulary

Factor: A number that is multiplied by another number to find a product.

Multiple: A number that is the product of two counting numbers.

Partial product: the product found by multiplying the tens and the ones separately.

Product: The answer to a multiplication problem.

- Homework due date: **Sunday, December 21st**
- Chapter 11 Test: **Thursday, Dec. 18th** (this week's HW is practice for the test)
- Feel free to contact me with any questions at diana.charaf@archimedean.org

Complete homework daily based on the schedule provided below:

Monday 12/15

Pages: 1 - 2 - 3 - 4

Tuesday 12/16

Pages: 533 - 534

Wednesday 12/17

Pages: 535 - 536

Thursday 12/18

Pages: 537 - 538

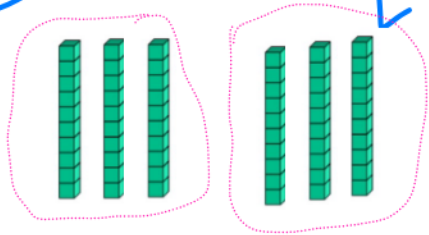
Friday 12/19

No HW - **Happy Holidays**



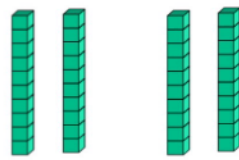
Chapter 11 Study Guide

1) What equation does this model represent?

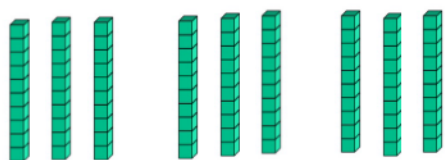


$$\boxed{2} \times \boxed{30} = \boxed{60}$$

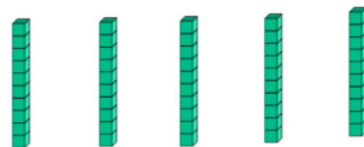
2 groups of 30



$$\boxed{} \times \boxed{} = \boxed{}$$



$$\boxed{} \times \boxed{} = \boxed{}$$



$$\boxed{} \times \boxed{} = \boxed{}$$

2) Enter the correct numbers in the boxes.

$$\begin{aligned} 7 \times 20 &= 7 \times \boxed{2} \text{ tens} \\ &= \boxed{14} \text{ tens} \\ &= \boxed{140} \end{aligned}$$

$$\begin{aligned} 2 \text{ tens} &= 20 \\ 14 \text{ tens} &= 140 \\ \text{tens} &= 0 \end{aligned}$$

$$\begin{aligned} 9 \times 500 &= 9 \times \boxed{5} \text{ hundreds} \\ &= \boxed{45} \text{ hundreds} \\ &= \boxed{4500} \end{aligned}$$

$$\begin{aligned} 5 \text{ hundreds} &= 500 \\ 45 \text{ hundreds} &= 4500 \\ \text{hundreds} &= 00 \end{aligned}$$

$$\begin{aligned}4 \times 30 &= 4 \times \square \text{ tens} \\ &= \square \text{ tens} \\ &= \square\end{aligned}$$

$$\begin{aligned}2 \times 50 &= 2 \times \square \text{ tens} \\ &= \square \text{ tens} \\ &= \square\end{aligned}$$

$$\begin{aligned}8 \times 200 &= 8 \times \square \text{ hundreds} \\ &= \square \text{ hundreds} \\ &= \square\end{aligned}$$

$$\begin{aligned}7 \times 200 &= 7 \times \square \text{ hundreds} \\ &= \square \text{ hundreds} \\ &= \square\end{aligned}$$

3) Distributive Property

$$\begin{aligned}2 \times 38 &= 2 \times (30+8) \\ &= (2 \times 30) + (2 \times 8) \\ &= 60 + 18 \\ &= 78\end{aligned}$$

$$\begin{aligned}4 \times 526 &= 4 \times (500+20+6) \\ &= (4 \times 500) + (4 \times 20) + (4 \times 6) \\ &= 2000 + 80 + 24 \\ &= 2,104\end{aligned}$$

Use Distributive Property

$$4 \times 27 =$$

$$9 \times 62 =$$

$$\begin{array}{r} \times 23 \\ \hline 5 \times 20 \leftarrow 100 \\ + 5 \times 3 \leftarrow 15 \\ \hline 115 \end{array}$$

Factors

Partial Products

Product

$$\begin{array}{r} \times 14 \\ \hline 7 \end{array}$$

$$\begin{array}{r} \times 28 \\ \hline 5 \end{array}$$

$$\begin{array}{r} \times 53 \\ \hline 8 \end{array}$$

4) Which equations show the Distributive Property?

$40 \times 3 = 3 \times 40$

Break apart $9 \times (10 + 20) = 9 \times 30$

$2 \times 60 = 2 \times (20 + 20 + 20)$

$4 \times 70 = (4 \times 7) \times (4 \times 10)$

5) A grocery store puts 2 stacks of yogurt cartons on each shelf. There are 2 cartons in each stack. How many cartons are there on 2 shelves?

6) A bake sale is charging \$6 per brownie.

Each pan of brownies is cut into 6 rows, with 9 brownies in each row. How much money will the bake sale make from each pan of brownies?

Name _____

Chapter Review

1. Alejandro saves \$500 each month. How much will he have saved after 4 months?

- A \$125
 B \$200
 C \$2,000
 D \$1,250

2. Select the equations that show the Distributive Property. Mark all that apply.

- A $8 \times 20 = 8 \times (10 + 10)$
 B $5 \times 60 = 5 \times (20 + 40)$
 C $30 \times 6 = 6 \times 30$
 D $9 \times (4 + 3) = 9 \times 7$

3. Use mental math to complete the pattern.

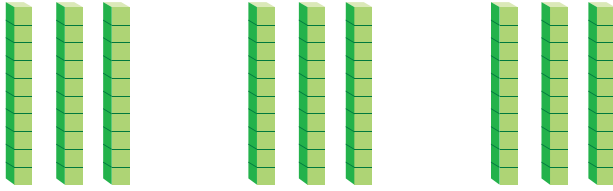
$$7 \times 8 = \underline{\hspace{2cm}}$$

$$7 \times 80 = \underline{\hspace{2cm}}$$

$$7 \times 800 = \underline{\hspace{2cm}}$$

Name _____

8. Samantha made this multiplication model. Complete the equation that represents the model.



_____ × _____ = _____

9. A printer prints newsletters for many groups every month. Which group uses the greatest number of pieces of paper?

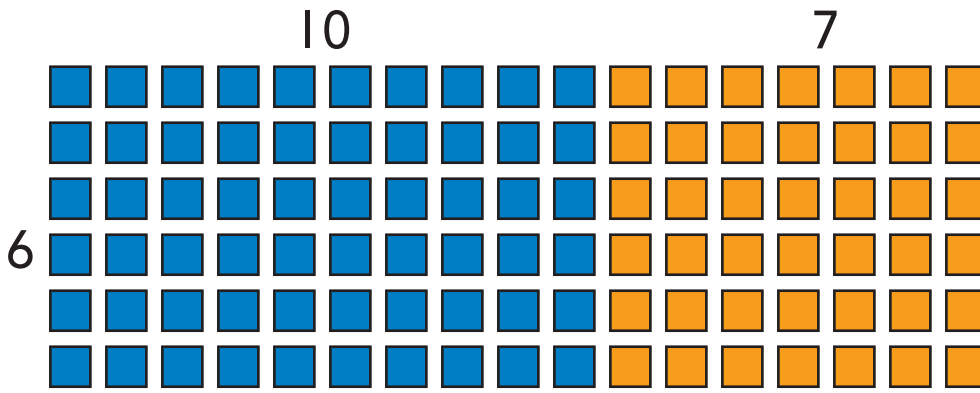
Group	Number of pieces of paper in newsletter	Number of copies of newsletter printed
Garden Ladies	5	70
Book Lovers Club	6	80
Model Train Fans	7	60
Travel Club	8	50

10. A store has 30 boxes of melons. Each box holds 4 bags. Each bag holds 2 melons. What is the total number of melons in the store?

_____ melons

11. There are 24 teams in the local soccer league. Each team needs 3 parent volunteers. How many volunteers do the teams need?

12. Find the product 6×17 .



$6 \times 10 =$ _____

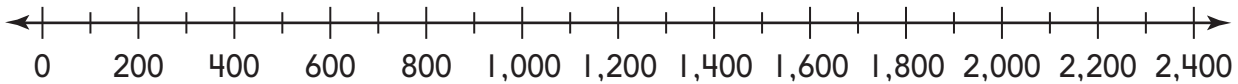
$6 \times 7 =$ _____

$6 \times 17 =$ _____

13. Draw a quick picture to find the product 3×800 .

$3 \times 800 =$ _____

14. Every plane can hold 300 passengers. Use the number line to find how many passengers 7 planes can hold.



_____ passengers

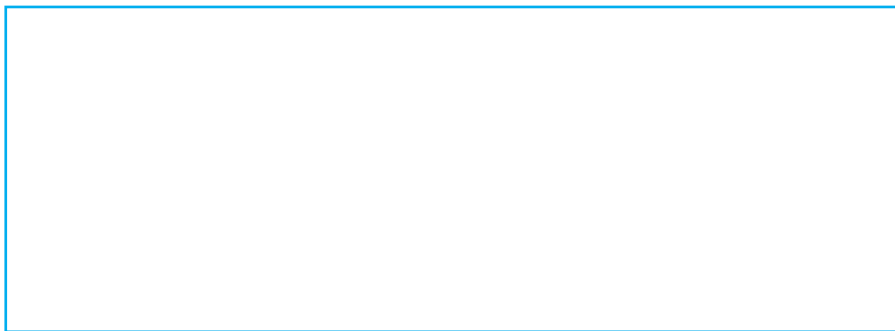
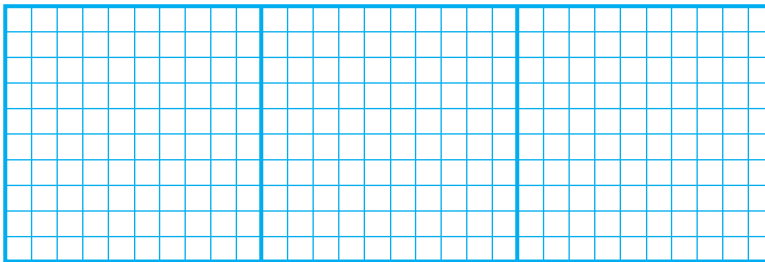
Name _____

15. Shan sees his friends for 90 minutes each day. In 7 days, how many minutes does he spend with his friends? Use place value to find out.

$$7 \times 90 = 7 \times \underline{\hspace{2cm}} \text{ tens}$$
$$= \underline{\hspace{2cm}} \text{ tens} = \underline{\hspace{2cm}}$$
$$\underline{\hspace{2cm}} \text{ minutes}$$

16. The bookstore has 6 shelves of books about animals. There are 30 books on each shelf. How many books about animals does the bookstore have?

Shade squares to make a diagram to show how you can use the Distributive Property to find the number of books about animals in the bookstore. Explain.



_____ animal books

17. Mercedes has 9 quarters. How many cents does she have? Show your work. (Remember: A quarter is worth 25 cents.)

18. Find the unknown factor.

_____ $\times 9 = 360$

19. Ruben is collecting cans for the recycling contest at school. He makes two plans to try to collect the most cans.

Plan A: Collect 20 cans each week for 9 weeks.

Plan B: Collect 30 cans each week for 7 weeks.

Part A

Which plan should Ruben choose? _____

Part B

Explain how you made your choice.
