Third grade

Chapter 5

5.1

Algebra describe patterns

The table shows the number of candles in different numbers of packs. How many candles will be in 4 packs?

Packs	1	2	3	4
Candles	2	4	6	

Describe a pattern in the columns.

Step 1 Look for a pattern by comparing the columns in the table. You can multiply the number of packs by 2 to find the number of candles in all.

$1 \times 2 = 2$

$2 \times 2 = 4$

$3 \times 2 = 6$

Multiply by 2 candles for each pack.

Step 2 Use the pattern to find the number of candles in 4 packs.

$4 \times 2 = 8$

So, there are 8 candles in 4 packs.

5.2

Algebra-find unknown factors

Lily has 20 stuffed animals. She wants to put the same number of stuffed animals on each of 5 shelves. How many stuffed animals will Lily put on each shelf?

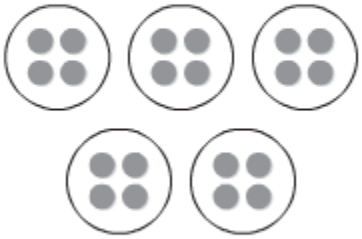
Find the unknown factor. $5 \times c = 20$

You can use counters to find the unknown factor.

Step 1 Use 20 counters.

Step 2 Make 5 equal groups. Place 1 counter in each of the groups until you have placed all 20 counters.

Step 3 Count the number of counters in each group.
4 counters



$c = 4$

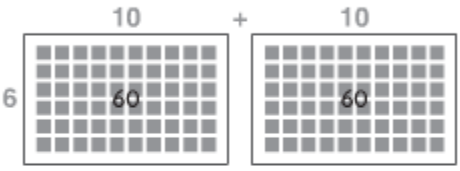
$5 \times 4 = 20$

So, Lily will put 4 stuffed animals on each of the 5 shelves.

5.3

Problem solving using the distributive property

There are 6 rows of singers in a performance. There are 20 singers in each row. How many singers are in the performance?

Read the Problem	Solve the Problem
What do I need to find? I need to find how many singers are in the performance	**Record the steps you used to solve the problem.**  First, I draw and label a diagram to show 6 rows of 20 singers. Next, I break apart 20 into 10 + 10 and find the products of the two smaller rectangles. $6 \times 10 =$ _____ $6 \times 10 =$ _____ Then, I find the sum of the two products. _____ + _____ = _____ $6 \times 20 =$ _____ So, there are _____ singers.
What information do I need to use? There are 6 rows of singers. Each row has 20 singers.	
How will I use the information? I can draw a diagram and use the Distributive Property to break apart the factor 20 into 10 + 10 to use facts I know.	

5.4

Multiplication strategies with multiples of 10

You can use place value to multiply with multiples of 10.

Find 5 × 20.

Step 1 Use a multiplication fact you know.

Think: 5 × 2 =10, so
5 × 2 ones = 10 ones

Step 2 Use place value to find the product.

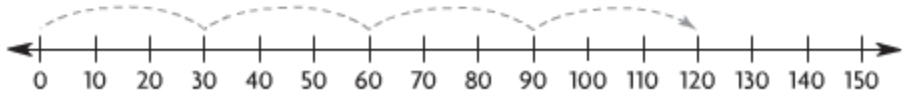
Think: 5 × 2 tens = 10 tens, or 100

So, 5 × 20 = 100.

You can also use a number line to multiply with multiples of 10.

Find 4 × 30.

Think: There are 4 groups of 30. Draw 4 jumps of 30.



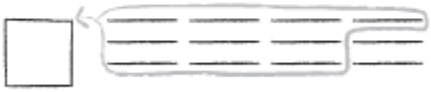
So, 4 × 30 = 120.

5.5

Multiply multiples of 10 by 1-digit numbers

You can use place value and regrouping to multiply multiples of 10.

Find 3 × 40.

Step 1 Use quick pictures to draw 3 groups of 40. _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	**THINK** Multiply the ones. 3 × 0 ones = 0 ones.	**RECORD** 40 × 3 0
Step 2 Regroup the 12 tens. 	Multiply the tens. 3 × 4 tens = 12 tens Regroup the 12 tens as 1 hundred 2 tens	40 × 3 120

So, 3 × 40 = 120.