

Homework & Practice 4-2

Use Models to Multiply 2-Digit Numbers by Multiples of 10

Another Look!

You can use arrays, area models, or place-value blocks to help find the product of 20×14 .

20×14 means 20 groups of 14, or (20 groups of 10) + (20 groups of 4).

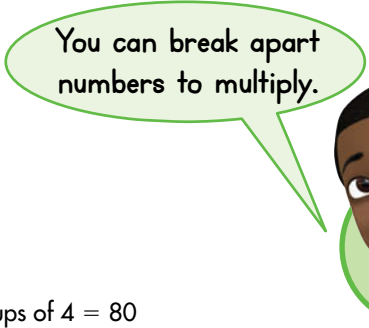
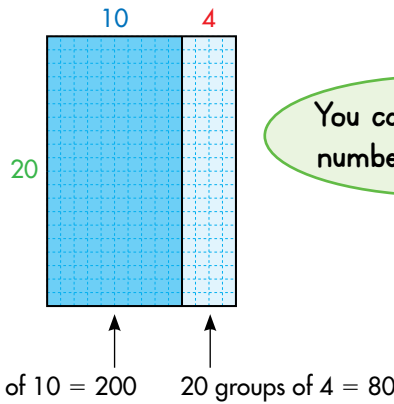
Add the partial products from the model.

20 groups of 10 = 200

20 groups of 4 = 80

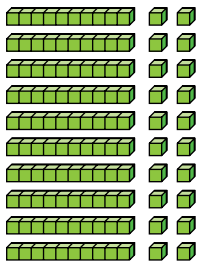
$200 + 80 = 280$

So, $20 \times 14 = 280$.



For 1–2, use the array to find each product.

1. 10×12



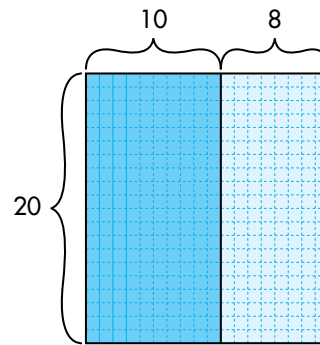
10 groups of 10 = _____

10 groups of 2 = _____

_____ + _____ = _____

So, $10 \times 12 =$ _____.

2. 20×18



20 groups of 10 = _____

20 groups of 8 = _____

_____ + _____ = _____

So, $20 \times 18 =$ _____.

For 3–6, find each product. Draw an array or an area model to help.

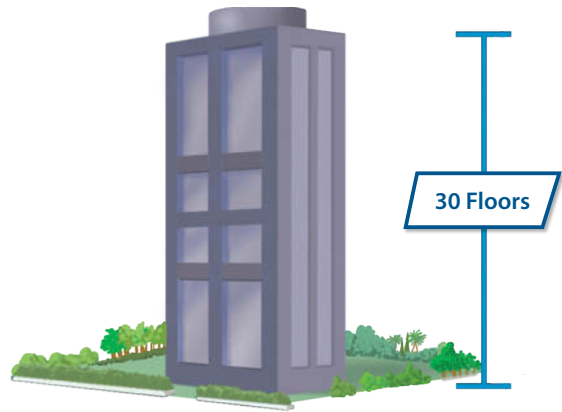
3. 50×15

4. 40×22

5. 30×39

6. 60×21

7. The height of each story of an apartment building is measured from the bottom of one floor to the bottom of the next floor. Each story has a height of 18 feet. How tall is the building?



8. **MP.1 Make Sense and Persevere**
Marta exercises 30 minutes each day. Greg exercises 40 minutes each day. How many more minutes does Greg exercise than Marta in a month that has 31 days?

9. A dentist orders 15 boxes of floss and 20 boxes of toothbrushes each month. Floss is sold 70 to a box and toothbrushes are sold 50 to a box. How many items does the dentist order each month?

10. Mrs. Harrigan ordered 30 boxes of glasses for her restaurant. Each box holds 16 glasses. She also ordered 30 boxes of plates. There are 25 plates in each box. How many glasses and plates did Mrs. Harrigan order altogether?

11. **Higher Order Thinking** Without multiplying, is the product of 45×10 or 50×10 greater? Explain.

Common Core Assessment

12. Miranda says 30×26 is greater than 20×36 . Is she correct? Draw a model to explain if Miranda is correct.

You can draw an area model or an array to represent the problem.

