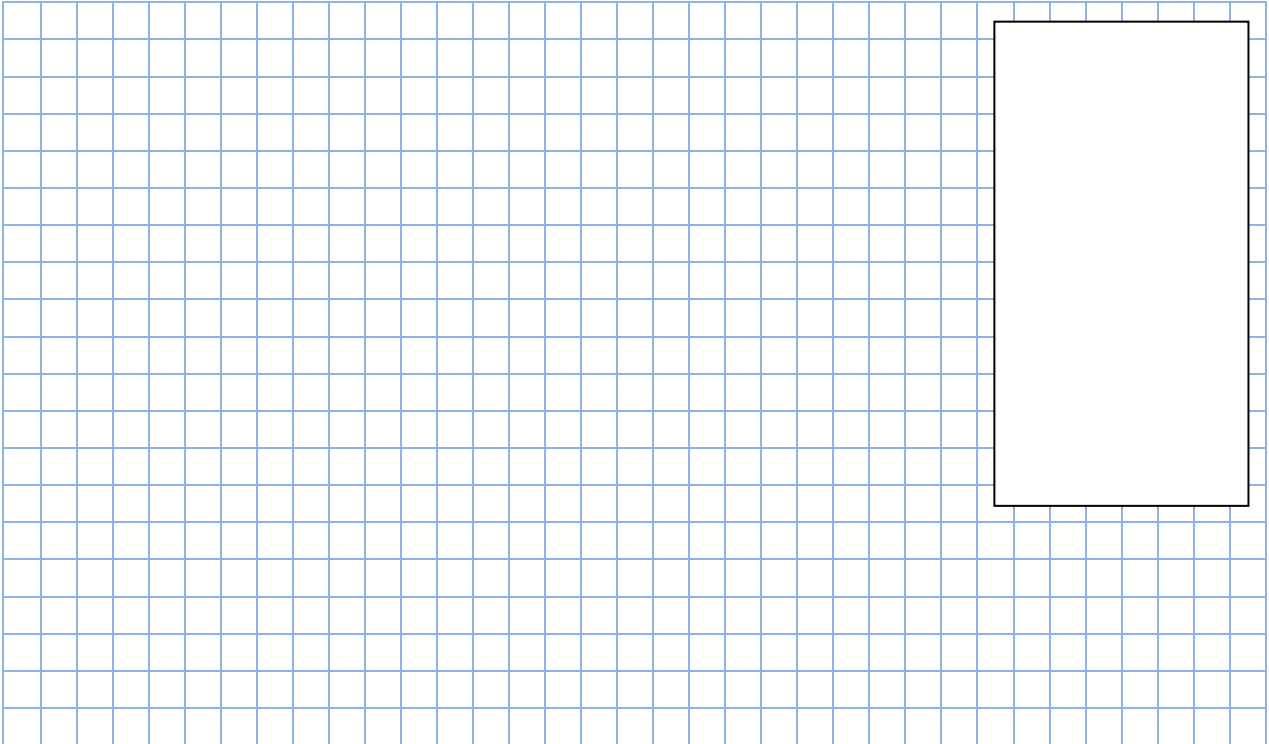# ARRAY MODELS

Name _____

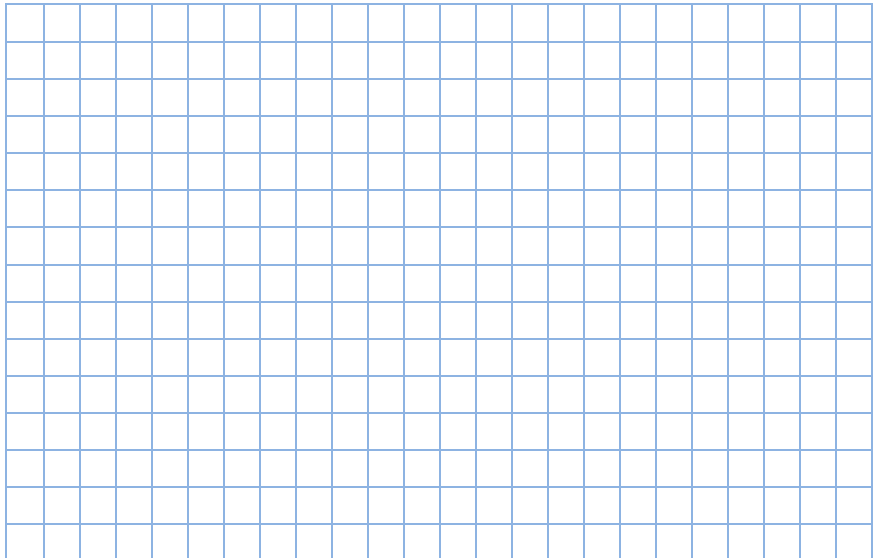**1.** **By breaking up the numbers, use an array model to multiply 17×15**

2. **Multiply 17×15 using the long multiplication method you learned in Primary School.**
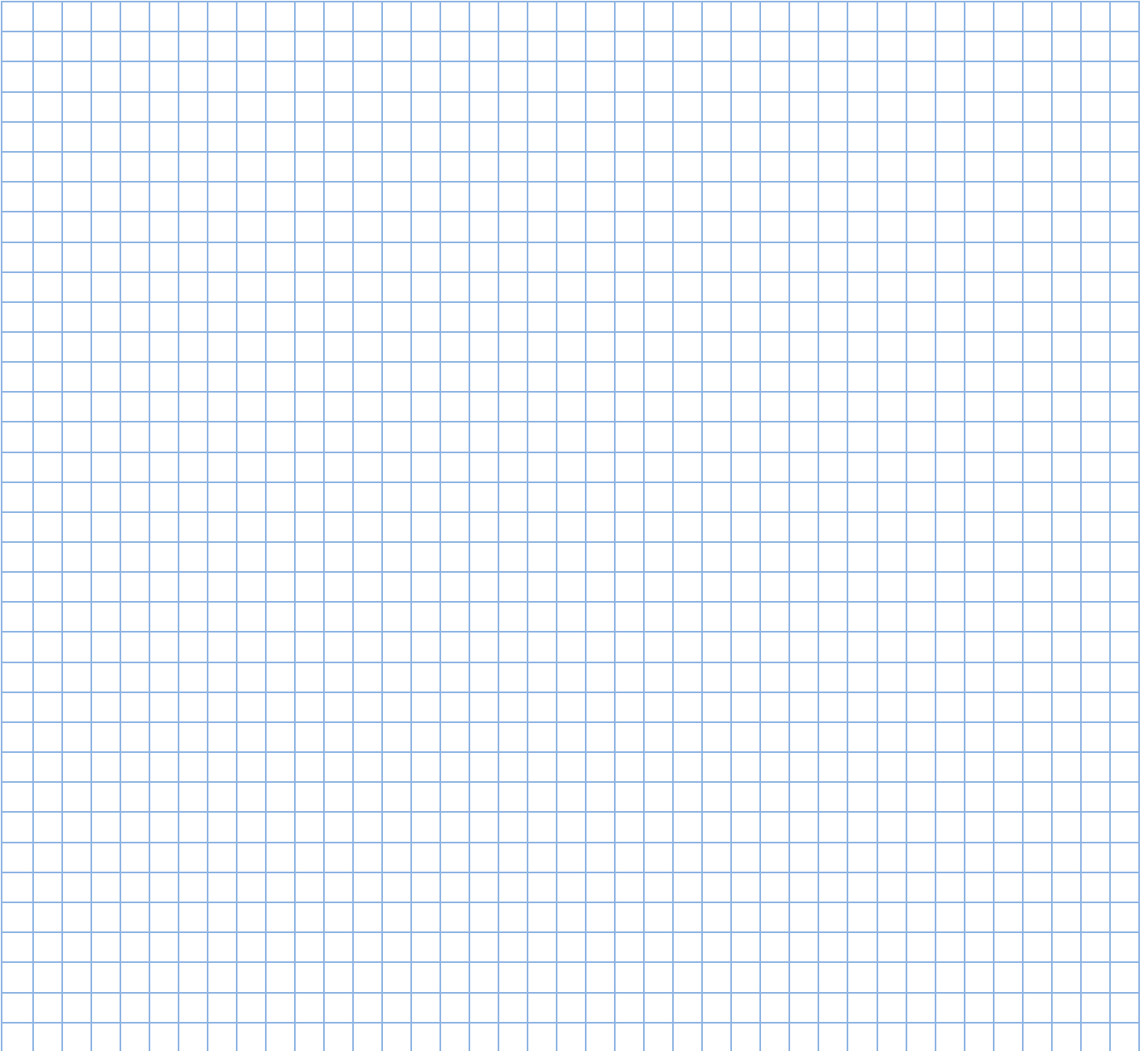
Can you see the number 170 in your diagram above?
Can you see the number 85 in your diagram above?

3. Multiply 12×16 using an array model.

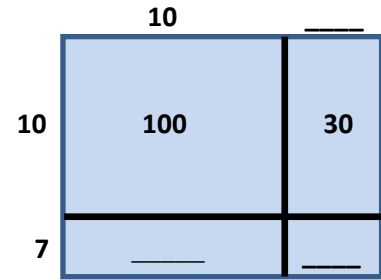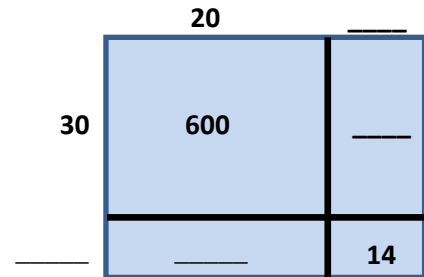**4.** Multiply the following bigger numbers using an array model.

$24 \times 35 =$

5. Do you think it is necessary to use square paper all the time to draw an array model? Explain why.

$24 \times 35 =$

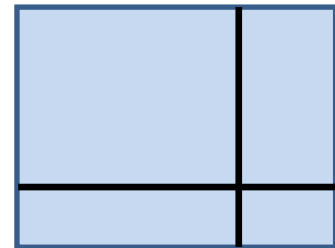## 6. Fill in the answers to the following multiplication sums using a rough array model

a.   **13 x 17** = $(10 + \_\_\_) \times (10 + \_\_\_)$

         = $100 + 30 + \_\_\_\_ + \_\_\_\_$

         = 221

	10	**____**
10	100	30
7	____	___

b.   **27 x 32** = $(20 + \_\_\_) \times (30 + \_\_\_)$

         = $\_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_$

         = $_____$

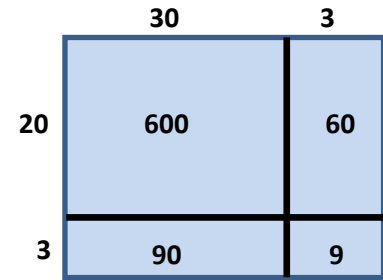|	**20**	**____**
30	600	____
____	____	14

c.   **35 x 41** =

d.   **14 x 18** =

e.   **27 x 41** =

7. Find the answers to the following multiplication sums using the Distributive Law and check your answer using an array model.

Example

= $(30 + 3) \times (20 + 3)$

$30(20 + 3) + 3(20 + 3)$

= 600 + 90 + 60 + 9

= 759

CHECK WORK USING AN AREA MODEL

	30	3
20	600	60
3	90	9

→ PLEASE USE THE ARROWS IN YOUR WORK

a. 19 x 13 =

b. 14 x 17 =

c. 25 x 25 =

d. 12 x 18 =