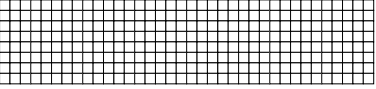Name _____ Date _____

Solving Problems Mara's Way

For Questions 1–3, break the rectangles into tens and ones. Write number sentences on the two new rectangles. Then fill in the boxes and blanks to complete the problems.

1. **A.**
$$\begin{array}{r} 36 \\ \times\ 8 \\ \hline 48 \end{array}$$
+ ☐
☐

_____ × _____ + _____ × _____ =

B. How was 48 computed in the problem above?

C. How does the product in the first box match the rectangles you drew?

D. Explain how you know your answer is reasonable.

2. **A.**
$$\begin{array}{r} 28 \\ \times\ 4 \\ \hline \end{array}$$
☐
+ 32
☐

_____ × _____ + _____ × _____ =

B. How did you find the product in the first box?

C. Explain how you know your answer is reasonable.

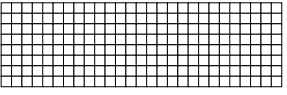Multiplication Models and Strategies   SAB · Grade 3 · Unit 13 · Lesson 3 **531**

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Name _____ Date _____

✓ **Check-In: Questions 3-8**

3. **A.**
$$\begin{array}{r} 27 \\ \times\ 8 \\ \hline 160 \end{array}$$
+ ☐
☐

_____ × _____ + _____ × _____ =

B. How was 160 computed in the problem above?

C. How does the product in the first box match the rectangles you drew?

D. Explain how you know your answer is reasonable.
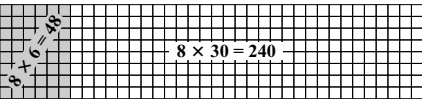
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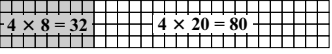### Solving Problem's Mara's Way
(SAB pp. 531–534)
Questions 1–8

1. **A.**
$$\begin{array}{r} 36 \\ \times\ 8 \\ \hline 48 \end{array}$$
+ 240
288

$8 \times 6 = 48$ $8 \times 30 = 240$
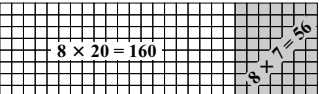
__8__ × __6__ + __8__ × __30__ = **240**

B. $8 \times 6 = 48$

C. $8 \times 30 = 240$ is like 8 rows of 30 squares in the larger rectangle.

D. Explanations will vary. Possible response: $30 \times 8 = 240$ and 40×8 is 320. 36 is in between 30 and 40 and 288 is in between 240 and 320 so I know it is a reasonable answer.

2. **A.**
$$\begin{array}{r} 28 \\ \times\ 4 \\ \hline 80 \\ + 32 \\ \hline 112 \end{array}$$
$4 \times 8 = 32$ $4 \times 20 = 80$

__4__ × __8__ + __4__ × __20__ = **112**

B. $20 \times 4 = 80$

C. Explanations will vary. Possible response: 4 quarters is $25¢ \times 4 = 100¢$. 28×4 should be a little more so 112 is reasonable.

3. **A.**
$$\begin{array}{r} 27 \\ \times\ 8 \\ \hline 160 \\ + 56 \\ \hline 216 \end{array}$$
$8 \times 20 = 160$ $8 \times 7 = 56$

__8__ × __20__ + __8__ × __7__ = **216**

B. $8 \times 20 = 160$

C. 56 is the same as 7 squares in each of the 8 rows in the smaller rectangle.

D. Explanations will vary. Possible response: 27 is close to 30. $30 \times 8 = 240$. 27×8 should be a little less than 240, so 216 is a reasonable answer.

4.

$$\begin{array}{r} 36 \\ \times\ 4 \\ \hline 24 \\ +\ 120 \\ \hline 144 \end{array}$$

$30 \times 4 = 120$ and $40 \times 4 = 160$. So 144 is reasonable because it is between my estimates.

5.

$$\begin{array}{cc} 20 & 7 \\ \times\ 8 & \times\ 8 \\ \hline 160\ + & 56\ = 216 \end{array}$$

The answer is close to $25 \times 8 = 200$. So 216 is reasonable.

6.

$$\begin{array}{r} 72 \\ \times\ 4 \\ \hline 280 \\ +\ 8 \\ \hline 288 \end{array}$$

The answer is close to $70 \times 4 = 280$. So 288 is reasonable.

7.

$$\begin{array}{cc} 40 & 2 \\ \times\ 5 & \times\ 5 \\ \hline 200\ + & 10\ = 210 \end{array}$$

The answer is close to my estimate of $40 \times 5 = 200$.

8.

$$\begin{array}{r} 64 \\ \times\ 7 \\ \hline 28 \\ +\ 420 \\ \hline 448 \end{array}$$

$60 \times 7 = 420$. That is close to 448.

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