

# Math 5 Study Guide Test NBT 5 & 6

Name \_\_\_\_\_

Date \_\_\_\_\_

## Question 1

Write the correct answer in each box. Use numerals instead of words. If necessary, use / for the fraction bar(s).

Fill in the values for A, B, and C to find the product of  $352 \times 13$  using the array.

	300	50	2
10	$10 \times 300$ 3,000	$10 \times 50$ B	$10 \times 2$ 20
3	$3 \times 300$ A	$3 \times 50$ 150	$3 \times 2$ C

$$\begin{array}{r}
 3,000 \\
 500 \\
 900 \\
 150 \\
 20 \\
 + 6 \\
 \hline
 4,576
 \end{array}$$

A = 900

B = 500

C = 6

So, the product of  $352 \times 13 = 4,576$

## Question 2

Mrs. James asked her students to multiply 276 and 13.

Fran used the standard algorithm to multiply 276 and 13. His work is shown below.

$$\begin{array}{r}
 \text{H T O} \\
 276 \\
 \times 13 \\
 \hline
 828 \\
 + 276 \\
 \hline
 3588
 \end{array}$$

Eric used a different equation to multiply 276 and 13. His work is shown below.

$$276 \times 13 = (276 \times 7) + (276 \times 6) = (1,932 + 1,656) = 3,588$$

Part A: Based on the steps already completed by the two students, which student's work will result in the correct final product?

Eric has the correct final product

Part B: What is the correct final product?

3,588

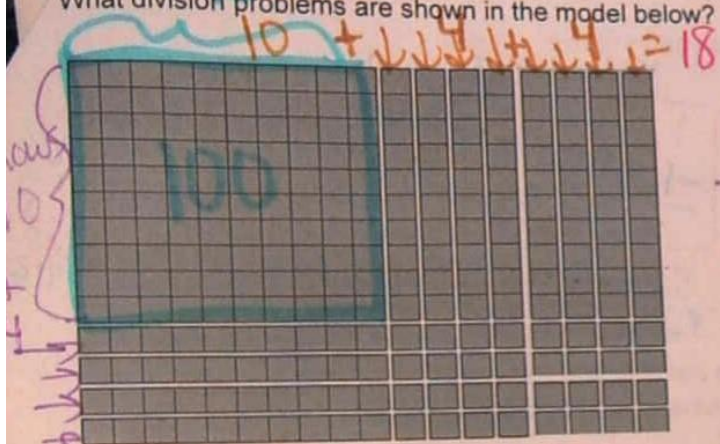
Part C: Explain where the mistake was made by the student whose work will not result in the correct final product.

Fran did not place a zero in the place holder for the ones column, where the six is.





Question 8: **10-Columns**  
 What division problems are shown in the model below?



100-Hundred Mat  
 120 = Ten Rods  
 + 32 = Ones  
252

Total: 252 (dividend)  
 Columns: 18 (Quotient)  
 Rows: 14 (divisor)

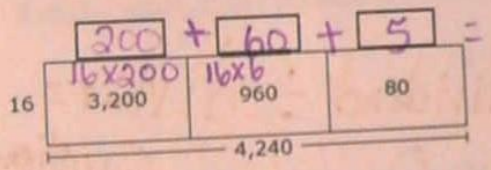
$252 \div 14 = 18$   
 dividend  $\div$  divisor = quotient

$$\begin{array}{r} 3 \\ 18 \\ \times 14 \\ \hline 72 \\ + 180 \\ \hline 252 \end{array}$$

Question 9

Use the model to find  $4,240 \div 16$ .

Fill in each box.



$$\begin{array}{l} 16 \\ \times 1 \\ \hline 16 \end{array} \quad \begin{array}{l} 16 \\ \times 2 \\ \hline 32 \end{array} \quad \begin{array}{l} 16 \\ \times 3 \\ \hline 48 \end{array} \quad \begin{array}{l} 16 \\ \times 4 \\ \hline 64 \end{array}$$

$$\begin{array}{l} 16 \\ \times 5 \\ \hline 80 \end{array} \quad \begin{array}{l} 16 \\ \times 6 \\ \hline 96 \end{array} \quad \begin{array}{l} 16 \\ \times 7 \\ \hline 112 \end{array} \quad \begin{array}{l} 16 \\ \times 8 \\ \hline 128 \end{array} \quad \begin{array}{l} 16 \\ \times 9 \\ \hline 144 \end{array}$$

$4,240 \div 16 = 265$

Question 10

Select ALL the correct answers.

Which equations could be used to find the value of  $9,590 \div 35$ ?

- A.  $(7,000 + 2,450 + 140) \div 35 = 274$
- B.  $(7,000 + 2,450) \div 35 + 140 = 126$
- C.  $(7,000 + 2,450 + 140) \div 35 = 274$
- D.  $(7,000 + 35) - (2,590 + 35) = 126$
- E.  $(7,000 - 2,450 - 140) \div 35 = 126$
- F.  $(7,000 + 35) + (2,590 + 35) = 274$

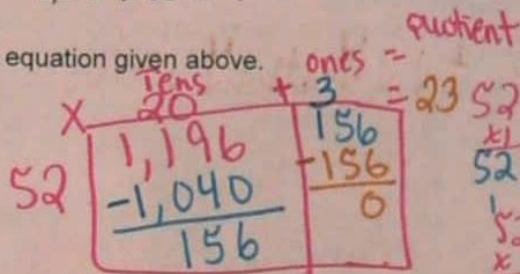
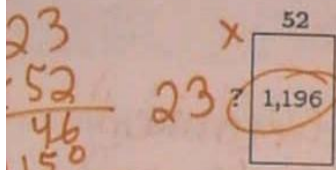
$$\begin{array}{r} 7,000 \\ 2,450 \\ 140 \\ \hline 9,590 \end{array}$$

$$\begin{array}{r} 274 \\ \times 35 \\ \hline 1370 \\ + 8220 \\ \hline 9590 \end{array}$$

Question 11

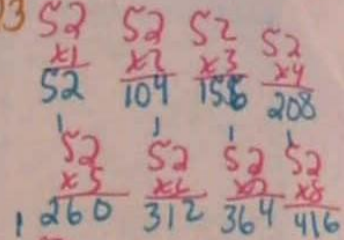
$$1,196 \div 52 = ?$$

Use the area model below to solve the equation given above.



quotient

ones = 23



$$52 \times 10 = 520$$

$$52 \times 20 = 1040$$

Question 12

Rachel and her friends are making necklaces out of beads and straws. They plan to use 12 beads and 5 straws for each necklace. They have a jar of beads that contains a total of 2,700 beads. How many necklaces can they make?

Write an equation to solve the problem.

$$\boxed{2,700} \div \boxed{12} = \boxed{225}$$

dividend

- $12 \times 1 = 12$
- $12 \times 2 = 24$
- $12 \times 3 = 36$
- $12 \times 4 = 48$
- $12 \times 5 = 60$
- $12 \times 6 = 72$

- $12 \times 7 = 84$
- $12 \times 8 = 96$
- $12 \times 9 = 108$
- $12 \times 10 = 120$
- $12 \times 11 = 132$
- $12 \times 12 = 144$

dividend  $\div$  divisor = Quotient

