Term 5 Week 2 – Maths Task 3

Twist It

Which calculation is correct?

1.

A. \[ \begin{array}{c}
2303 \\
\times 12 \\
\hline
71693
\end{array} \]

B. \[ \begin{array}{c}
2042 \\
\times 12 \\
\hline
4084 \\
6048 \\
71693
\end{array} \]

2.

A. \[ \begin{array}{c}
3203 \\
\times 27 \\
\hline
86481
\end{array} \]

B. \[ \begin{array}{c}
7015 \\
\times 14 \\
\hline
28061 \\
49020 \\
71150
\end{array} \]

Add <, > or = to make these statements correct

3.

\[ \begin{array}{c}
2331 \\
\times 13 \\
\hline
99930
\end{array} \]  \[ \begin{array}{c}
1012 \\
\times 21 \\
\hline
3123 \\
\times 32
\end{array} \]

4.

\[ \begin{array}{c}
6283 \\
\times 14 \\
\hline
8429 \\
\times 13
\end{array} \]  \[ \begin{array}{c}
2946 \\
\times 31 \\
\hline
3213 \\
\times 73
\end{array} \]

Solve the following calculations using the formal method for multiplication (column method)

5. \[ 31 \times 5142 = \]

6. \[ 42 \times 2307 = \]

7. Seventy-four multiplied by two thousand and eighty-six

8. Four thousand, nine hundred and eighteen multiplied by forty-five

Now find the sum of and the difference between the smallest and greatest answers.
1. Use all of the digit cards in the calculation below to make the closest possible number to 50,000:

\[
\begin{array}{c}
3 & 1 & 2 \\
\end{array}
\begin{array}{c}
\boxed{,} & 2 & \boxed{1} \\
\end{array}
\begin{array}{c}
x & 2 & \boxed{5} \\
\end{array}
\]

2. Use all of the digit cards in the calculation below to make the closest possible number to 170,000:

\[
\begin{array}{c}
3 & 1 & 9 \\
\end{array}
\begin{array}{c}
7 & \boxed{,} & \boxed{1} \\
\end{array}
\begin{array}{c}
x & 2 & \boxed{5} \\
\end{array}
\]

3. Use all of the digit cards in the calculation below to make the closest possible number to 240,000:

\[
\begin{array}{c}
7 & 6 & 4 \\
\end{array}
\begin{array}{c}
\boxed{,} & \boxed{2} & 5 \\
\end{array}
\begin{array}{c}
x & 3 & \boxed{1} \\
\end{array}
\]

4. Tom has worked out the answer to \(2457 \times 31\) below. Is he correct? Explain your answer.

\[
\begin{array}{c}
2 & 4 & 7 & 5 \\
\times & 3 & 1 \\
\hline & 2 & 4 & 7 & 5 \\
& 7 & 4 & 2 & 5 \\
\hline & 9 & 8 & 9 & 5 \\
\end{array}
\]

5. Julie has worked out the answer to \(3618 \times 13\) below. Is she correct? Explain your answer.

\[
\begin{array}{c}
3 & 6 & 1 & 8 \\
\times & 1 & 3 \\
\hline & 9 & 8 & 5 & 4 \\
\hline & 3 & 6 & 1 & 8 & 0 \\
\hline & 4 & 5 & 0 & 3 & 4 \\
\end{array}
\]

6. David says:

\[
\text{I am thinking of a 4-digit number between three thousand and four thousand. The total of the digits in my number is twenty. If I multiply my number by twenty-six, I get an answer between ninety thousand and ninety-one thousand.}
\]

What could David’s number be? Find two possible numbers.
Answers:

Twist It

1) B
2) A
3) Part 1 >
   Part 2 <
4) Part 1 <
   Part 2 >
   Part 3 >
5) 159,402
6) 96,894
7) 154,364
8) 221,310
9) Sum of greatest and smallest = 318,204
   Difference between greatest and smallest = 124,416

Deepen It

1) 2211 x 23 = 50853
2) 7931 x 21 = 166551
3) 6452 x 37 = 237725
4)
   5a. An explanation that recognises Tom has not included a place holder when multiplying his tens.

5)
   5b. An explanation that recognises Julie has not added the thousand carried over from the 3 x 6 hundreds.

6)
   9b. Various answers, for example: 3,494 x 26 = 90,844 and 3,476 x 26 = 90,376