## Add Two 4-Digit Numbers 2

1. Which of these calculations give an answer which contains the following digits?


| Th | H | T | O |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |


| Th | $\mathbf{H}$ | T | $\mathbf{O}$ |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

2. Add two of the numbers represented below to make one odd and one even total.

| Th | H | T | O |
| :---: | :---: | :---: | :---: |
|  |  |  | 0 |


| Th | H | T | O |
| :---: | :---: | :---: | :---: |
|  |  |  | 0 |


| Th | H | T | O |
| :---: | :---: | :---: | :---: |
|  |  |  |  |

## $\underset{\sim}{0}$

3. Dylan rolls a 6 sided dice to generate numbers to fill in the missing digits.

He says, "No matter what numbers I roll for the missing digits, I will only need to exchange once."


Is he correct? Explain why.

| Th | H | T | O |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  |  |
|  |  |  | 0 |
|  |  |  | 0 |


| Th | H | T | O |
| :---: | :---: | :---: | :---: |
| 0 | 0 |  | 0 |
|  |  |  |  |
|  |  |  | 0 |
|  |  |  |  |

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4. Which of these calculations give an answer which contains the following digits?


|  | 3 | 0 | 8 | 1 |
| :--- | :--- | :--- | :--- | :--- |
| + | 3 | 0 | 7 | 0 |
|  |  |  |  |  |
|  |  |  |  |  |


|  | 1 | 2 | 7 | 1 |
| :--- | :--- | :--- | :--- | :--- |
| + |  | 2 | 6 | 5 |
|  |  |  |  |  |
|  |  |  |  |  |


|  | 2 | 5 | 3 | 5 |
| :---: | :---: | :---: | :---: | :---: |
| + | 1 | 0 | 2 | 6 |
|  |  |  |  |  |
|  |  |  |  |  |

5. Add two of the numbers represented below to make one odd and one even total.


| Th | H | T | $\mathbf{0}$ |
| :---: | :---: | :---: | :---: |
| 80 |  |  | 00 |

2,163
4,072
6. Bethany rolls a 6 sided dice to generate numbers to fill in the missing digits. She says, "No matter what numbers I roll for the missing digits, I will only need to exchange once."

|  | 5 | 2 | 9 | 3 |
| :--- | :---: | :---: | :---: | :---: |
| + | 2 | 4 |  | $\square$ |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |



Is she correct? Explain why.

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## Add Two 4-Digit Numbers 2

7. Which of these calculations give an answer which contains the following digits?

$1,000100100100100100101111+438$

Three thousand, four hundred and ninety-five + 1412
Three thousand, six hundred and eleven + four thousand, three hundred and twenty-nine
8. Add the numbers represented below. One total must be odd, one must be even and there must only be one exchange in each calculation.

Five thousand, seven hundred and forty-five

$$
3,000+500+50+1
$$

## 1,624

9. Vanessa rolls a 6 sided dice to generate numbers to fill in the missing digits. Bethany says, "No matter what number I roll for the missing digits I will only need to exchange once."


## Two thousand, four hundred and seventy-three + 4 <br> $\square$

$4 \square 2 \square$ + three thousand, two hundred and $\qquad$ - $\qquad$
Is she correct? Explain why.

## Homework/Extension

## Add Two 4-Digit Numbers 2

## Developing

1. $3,246+2,124=5,370$
2. $4,315+2,146=6,461$ or $2,146+1,425=3,571 ; 4,315+1,425=5,740$
3. Dylan is correct. If a 6 was rolled for each missing number, there would only be one exchange needed $(6+9)$.

## Expected

4. $1,271+265=1,536$ and $2,535+1,026=3,561$
5. $5,346+2,163=7,509$ or $2,163+4,072=6,235 ; 5,346+4,072=9,418$
6. Bethany is not correct. If a 6 was rolled for each missing digit, there would be two exchanges needed - one in each calculation.

## Greater Depth

7. $3,495+1,412=4,907$ and $3,611+4,329=7,940$
8. $5,745+3,551=9,296$ or $5,745+1,624=7,369 ; 3,551+1,624=5,175$
9. Vanessa is not correct. If a 6 was rolled for each missing digit there would be two exchanges needed - one in each calculation.
