1) Find out how many coins are hidden in each treasure chest. Use the representations to help you solve each calculation.

2) Complete these column additions.

|  | 3 | 2 | 5 | 8 |
| :---: | :---: | :---: | :---: | :---: |
| + | 1 | 2 | 9 | 4 |
|  |  |  |  |  |
|  |  |  |  |  |


|  | 4 | 3 | 4 | 9 |
| :--- | :--- | :--- | :--- | :--- |
| + | 2 | 9 | 2 | 6 |
|  |  |  |  |  |
|  |  |  |  |  |


|  | 5 | 6 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: |
| + | 2 | 3 | 8 | 1 |
|  |  |  |  |  |
|  |  |  |  |  |

3) Use < or > to compare the total number of coins in each bag.

4) Captain Fisheye, Captain Shark Bait and Captain Squid Beard used different representations to calculate the number of coins in this bag. Whose answers are correct? Explain and correct any errors.

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
5) Pirate Plankton thinks that when adding together two 4-digit numbers, the most number of times he will need to regroup is two. Is he correct? Prove your answer.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
6) How many different ways can you find to complete this calculation? Can you find any ways which do not include any regrouping? Which ways include one lot of regrouping? Which ways include more than one lot of regrouping?

|  | 6 | 8 |  | 3 |
| :---: | :---: | :---: | :---: | :---: |
| + | 1 | 3 | 1 |  |
|  | 8 | 1 | 4 |  |
|  |  |  |  |  |



| No Regrouping | One Lot of Regrouping | More Than One Lot of Regrouping |
| :--- | :--- | :--- |
|  |  |  |

2) Use the gold coins below to create two 4-digit numbers so that when you add them together using the column method, regrouping happens three times. You can only use each coin once per calculation. Find 10 different solutions.

$\square$
3) Now write a missing number addition including more than one lot of regrouping for a friend to solve!
