## RECALL - POP QUIZ

1. Find $25 \%$ of 120
2. Write $60 \%$ as a fraction and decimal
3. Find $60 \%$ of 90
4. Find?

$$
25 \% \text { of } ?=13
$$

5. What percentage of the grid is shaded?
6. Find?


$$
30 \% \text { of ? }=48
$$

```
Find?
\(? \%\) of \(96=120\)
```


## LEARNING HABITS?



## GUIDED PRACTICE

Can you visit every square on the board just once?

You can start anywhere and you can only move your 'Knight' in an L. shape: 1 square in one direction and 2 in the other.


| 3 | 4 | 0 |
| :--- | :--- | :--- |
| 3 | 0 | 0 |

To see how well you have done, you can subtract the total of the unvisited numbers from 78.

The higher their final total, the better they will have done.

## INTELLIGENT PRACTICE



## DIVE DEEPER

## SQUARES ON A CHESS BOARD

How many squares are there on a chessboard?

Work systematically to try and find all the possible squares.

Think carefully about how you record you work.


$$
\text { What happens on an ' } n \text { by } n \text { ' board? }
$$

## DIVE DEEPER

## EIGHT QUEENS

This is a famous problem: Place eight queens on a chessboard (an 8 by 8 grid) so that none can capture any of the others.

Remember that a queen can move any number of squares across, down or diagonally.

Is there more than one solution?

horizontal
vertical
Use counters to help you solve this
diagonal

## SELF-ASSESSMENT

- Some will even be able to generate rules to solve a complex problem
- Some will be able to organise their investigation to ensure they don't duplicate answers
- Most will be able to continue to investigate to try and find the final solution and not just ' $a$ ' solution
- All will be able to record their findings

