$\qquad$
Part A: Complete the times table grid below

| $\times$ | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |  |  |

## Part B: Factor Pairs

Work out the missing factors in the following factor pairs


Write the factors of 48 and 60.

## Part C: Further Factor Pairs

List the factor pairs of the following numbers:
a
45
C $\quad 30$
e $\quad 64$
b $\quad 27$
d $\quad 49$
f 36

Part D: Abundant, Deficient and Perfect Numbers
A perfect number is one where the sum of the factors add up to exactly twice the number itself.
An example of a perfect number is 6 because its factors are $\{1,2,3,6\}$ which, when added together sums to 12 .

For the numbers, 2 to 40, calculate the sum of their factors list the numbers in perfect, deficient and abundant numbers.

| Perfect Numbers <br> Sum of factors =2n | Abundant Numbers <br> Sum of factors $>\mathbf{2 n}$ | Deficient Numbers <br> Sum of factors $\mathbf{2 n}$ |
| :--- | :--- | :--- |
|  |  |  |

