**1)** List all the factors of each number in the box below it. Then list the common factors for each number pair in the larger space below that.

**a)**

| 12 | 15 |
|----|----|
|    |    |

**b)**

| 24 | 36 |
|----|----|
|    |    |

**c)**

| 81 | 60 |
|----|----|
|    |    |

**d)**

| 45 | 16 |
|----|----|
|    |    |

**e)**

| 56 | 20 |
|----|----|
|    |    |

**f)**

| 28 | 48 |
|----|----|
|    |    |

**2)** Each number below is the highest common factor of a pair of numbers. What could each pair of numbers be?

**a)**

| 3 |
|---|
|   |

**b)**

| 4 |
|---|
|   |

**c)**

| 6 |
|---|
|   |

Look at these statements. Decide if each one is always, sometimes or never true. Explain your reasoning for each statement.

Always, sometimes, never?

**a)** A number has an even number of factors.

_____

_____

_____

**b)** Pairs of even numbers have more common factors than pairs of odd numbers.

_____

_____

_____

**c)** A number has at least two factors.

_____

_____

_____

**d)** Some pairs of numbers have no common factors.

_____

_____

_____

**1)** Stefan has two different packs of football cards. He has 64 red football cards and 48 green football cards. He wants to put them into an album with some pages of red cards and some pages of green cards. He wants to have the same number of cards on each page of the album. He asks his friends for some help.

**Libby**
Each page should have 6 cards on it.

**Aaron**
Each page should have 8 cards on it.

Who do you agree with? Explain your answer.

_____

_____

_____

**2)** Pawel is working on a craft project. He has two pieces of ribbon. One is 180cm long and the other is 240cm long. He needs to cut the ribbons into equal pieces. He doesn't want to waste any ribbon by having any left over.

   **a)** Can you find all the different possible lengths of ribbon he could cut?

   **b)** Can you explain why he would not be able to cut the ribbons into lengths of 40cm?

_____

_____

_____