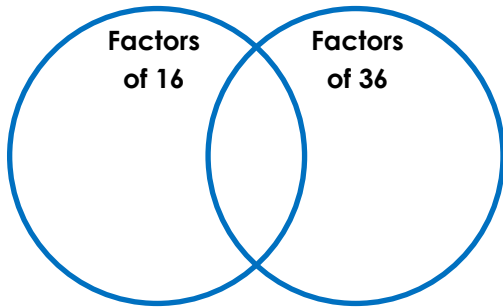### FLUENCY 1

Complete the statement.

> A common factor is a number that _____ exactly into two or more numbers.

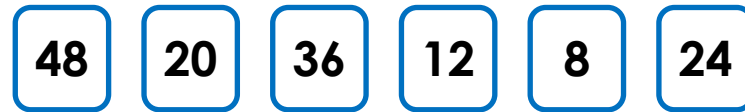### FLUENCY 2

Complete the diagrams to find the common factors.

Factors of 16   Factors of 36

	Factor of 32	Not a Factor of 32
Factor of 20		
Not a Factor of 20		

FLUENCY 3

Look at the number cards below.
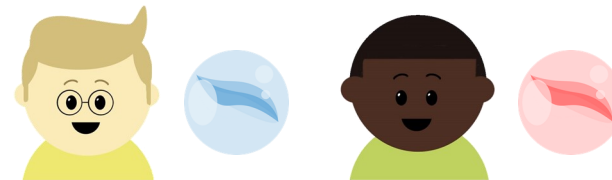
| 48 | 20 | 36 | 12 | 8 | 24 |

Which three numbers share these common factors?

> 4   2   6   3

FLUENCY 4

Alfie and Caleb collect marbles.

Alfie has 30 marbles and Caleb has 42.

They are sorting their marbles into the same sized equal groups.

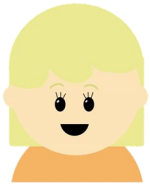What is the highest number of marbles they can put into each of their groups?

FLUENCY TASKS
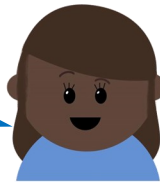
REASONING TASKS

REASONING 1

Jane and Anita are discussing common factors.

Jane

> 21 and 28 have more common factors then 10 and 15.

> I disagree. They have the same number of common factors.

Anita

Who is correct? Explain your reasoning.

REASONING 2

True or false?

> There are only 2-digit numbers that have the common factors 1, 2, 3, 6, 9 and 18.
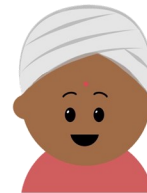
Convince me.

REASONING 3

Always, Sometimes or Never?

"If two numbers are even, they will have an even number of common factors."

Prove your answer with examples.

REASONING 4

Ranjit is finding the common factors of 16 and 24.

> 16 32 (48) 64 80 (96) 112...
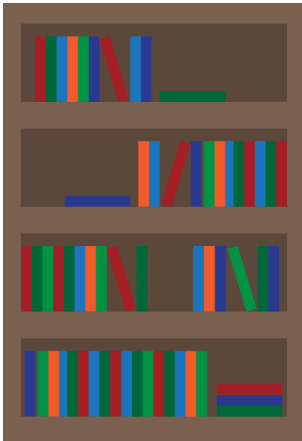> 24 (48) 72 (96) 120 144...

Explain the mistake he has made.

PROBLEM SOLVING 1

A book shop is celebrating their opening weekend by giving out gifts to customers.

- Every second customer will receive a free bookmark.
- Every sixth customer will receive a 10% off voucher.
- Every ninth customer will receive a free book.

How often will a customer receive all 3 gifts?

Can you write your own word problem for a friend using your knowledge of common factors?

PROBLEM SOLVING 2

Use the cards to complete the statement.

15	49	3	84	42	36
60	18	21	7	12	6

☐ is a common factor of ☐ , ☐ and ☐

How many possibilities can you find?

PROBLEM SOLVING TASKS