



DEEPENING UNDERSTANDING ANSWER SHEET

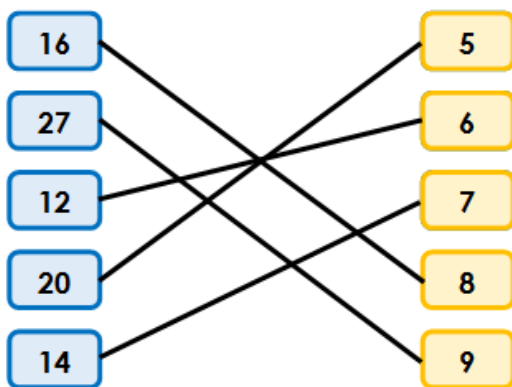
YEAR 5 PIM – FACTORS

Fluency 1

A factor is a number that you multiply by another number to make a product.

A factor is a number that divides exactly into another number.

Fluency 2



Fluency 3

18 cookies: 1, 2, 3, 6, 9, 18

36 cookies: 1, 2, 3, 4, 6, 9, 12, 18, 36

42 cookies: 1, 2, 3, 6, 7, 14, 21, 42

Fluency 4

Any number which has 8 as a factor also has 2 and 4 as factors.

Any number which has 10 as a factor also has 2 and 5 as factors.



Reasoning 1

Modelled DAB Reasoning Responses

D – 4 is the odd one out.

A – It is the only number which is not a factor of 30.

B – 1 and 30, 2 and 15, 3 and 10, 5 and 6 all divide exactly into 30. 4 does not divide exactly into 30.

Reasoning 2

Modelled DAB Reasoning Response

D – I agree with Anita.

A – If a number is a factor of 22, it must also be a factor of 44, 66 and 88.

B – The number 22 is a factor of 44, 66 and 88 because it divides exactly into each of those numbers. Any number which divides exactly into 22 must also divide exactly into multiples of 22.

Reasoning 3

Modelled DAB Reasoning Response

D – Sometimes

A – Factors come in pairs but not all numbers have an even number of factors.

B – Square numbers have an odd number of factors because one factor is multiplied by itself to reach it. For example, the number 49 has three factors – 1, 7 and 49.

Reasoning 4

Modelled DAB Reasoning Response

D – Ranjit could have picked 3, 4, 5 and 6 or 2, 3, 5 and 6.

A – These sets of numbers meet the given criteria.

B – The number cards 3, 4, 5 and 6 could have been chosen because 3, 4 and 6 are three factors of 24, 3 and 5 are odd and the total of the cards is 18 which is less than 20. The number cards 2, 3, 5 and 6 could have been chosen



because 2, 3 and 6 are three factors of 24, 3 and 5 are odd and the total of the cards is 16 which is less than 20.

Download our 'DAB' posters to support reasoning in your classroom:

<https://www.deepeningunderstanding.co.uk/product/dab-reasoning-posters/>

Problem Solving 1

There are 10 different solutions:

1 row of 48 trees

48 rows of 1 tree

2 rows of 24 trees

24 rows of 2 trees

3 rows of 16 trees

16 rows of 3 trees

4 rows of 12 trees

12 rows of 4 trees

6 rows of 8 trees

8 rows of 6 trees

Problem Solving 2

28

