21.01.2021 – Correspondence Problems

*Use this sheet **WHEN** you've completed the main worksheet and want a challenge. Remember to use your blue book if you have it to show your workings. The questions were resourced from White Rose Maths and Twinkl.*

1. Here are the meal choices in the school canteen.

Starter	Main	Dessert
Soup Garlic Bread	Pasta Chicken Beef Salad	Cake Ice-cream Fruit Salad

There are 2 choices of starter, 4 choices of main and 3 choices of dessert.

How many meal combinations can you find? Can you use a systematic approach?
Can you represent the combinations in a multiplication?

If there were 20 meal combinations, how many starters, mains and desserts might there be?

There are 24 meal combinations.

The question is 2 x 4 x 3 = 24

(2 x 4 = 8 x 3 = 24)

Multiple answers:

You could have

1 x 1 x 20

1 x 2 x 10

2 x 2 x 5

2. Alex has 6 T-shirts and 4 pairs of shorts.
Dexter has 12 T-shirts and 2 pairs of shorts.
Who has the most combinations of T-shirts and shorts?
Explain your answer.

They both have 24 combinations. 6 x 4 = 24 and 12 x 2 = 24

3. **1)** Henry has some hats, some jumpers and some pairs of trousers. He can make 24 different outfits.

How many hats, jumpers and pairs of trousers could he have?

2) Ben has 3 hats, 2 jumpers and 2 pairs of trousers.

Eli has 6 jumpers and 3 pairs of trousers.

I have the most different possible outfits.

Ben

Is Ben wrong or right?

Use multiplication calculations to prove it.

Multiple answers. He could have:

3 hats, 4 jumpers and 2 pair of trousers.

All answers will have to multiply to make 24.

Ben is wrong. Ben has 12 possible outfits.

Eli has 18 possible outfits.

Ben = 3 x 2 x 2 = 12

Eli = 6 x 3 = 18