Preparation Task 1 (Class Video)

Name: ________________

1a) ____________

Find the largest possible number you can make with these 3 digits. __________

Find the smallest possible number you can make with these 3 digits. __________

Circle the numbers that it is **impossible** to make with these 3 digits

472	242	273	274	474
724	777	742	427	247

1b) ____________

Find the largest possible number you can make with these 3 digits. __________

Find the smallest possible number you can make with these 3 digits. __________

List all of even numbers that you can make using these 3 digits: ____________________________

1c) ____________ & ____________

List of of the different numbers you can make with the first set of 3 digits in order from the largest number possible to the smallest number possible:

____

List of of the different numbers you can make with the second set of 3 digits in order from the largest number possible to the smallest number possible:

____

Both sets had 3 digits in them.

Discuss and **explain** why it is possible to make more 3 digit numbers with the second set than with the first set.

1d) ____________

8520 5820 2805
8502 5802 2580
8250 5280 2508
8052 5208 2085
8025 5082 2058
5028

Challenge:

Robyn made a list of all the numbers she could think of that use these 4 digits.

Identify and **record** the 4 digit numbers that she has missed.

Preparation Task 2 (Class Video)

Name: ____________________

2a)

I can use as many 20c, 10c and 5c coins as I like.

Find and **record** all the ways can I make _________

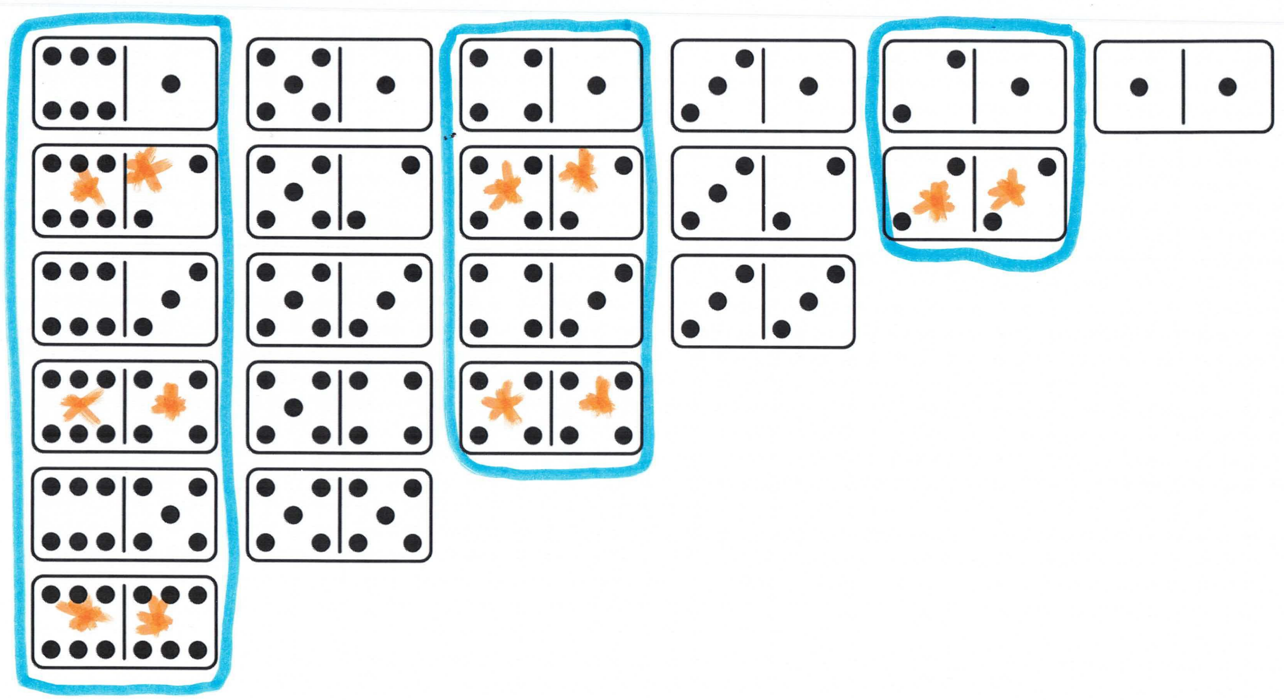
With one coin? 2 coins? 3 coins? 4 coins?

5 coins? 6 coins? 7 coins? 8 coins?

2b)

Marc was asked to find dominoes that had an even number of spots on each side.

Discuss and **explain** why he drew the blue line and then why he drew the orange stars.



Preparation Task 3

Name: ____________________

3a)

Avis was asked to solve this problem:

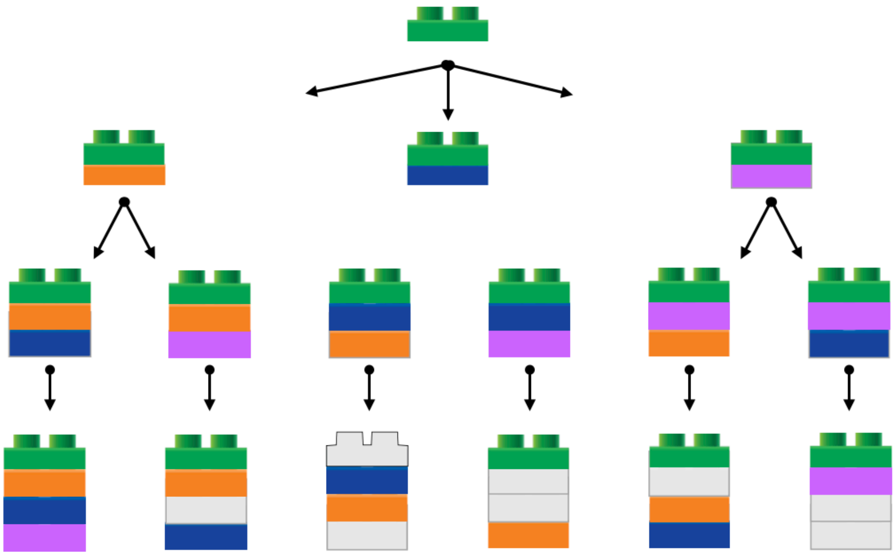
I have 4 blocks. They are green, blue, orange and purple.

How many different towers can I make that are 4 blocks high?

The green blocks must always be on top.

She drew a tree diagram to find the answer.

Review her diagram and **identify** what colour the grey blocks should be. **Colour** them correctly.



3b) **Challenge**

Bowen tried to find all the 4 digit numbers it is possible to make with 1, 3, 0 and 7.

He has not used a system to help him search.

Create your own organised list next to Bowen's work. You could start with the largest or smallest possible number.

Circle the numbers on your list that Bowen didn't find.

1730 1073
3071 7310 7130
7301 3107 3710
3701 3017
3170 7103 7031
1037 1370 1703

Preparation Task 1 (Class Video) Answers

Name: ____________________

1a) 472

Find the largest possible number you can make with these 3 digits. 742

Find the smallest possible number you can make with these 3 digits. 247

Circle the numbers that it is **impossible** to make with these 3 digits

472	242	273	274	474
724	777	742	427	247

1b) 965

Find the largest possible number you can make with these 3 digits. 965

Find the smallest possible number you can make with these 3 digits. 569

List all of even numbers that you can make using these 3 digits: 956, 596

1c) 301 & 724

List of of the different numbers you can make with the first set of 3 digits in order from the largest number possible to the smallest number possible:

310, 301, 130, 103

List of of the different numbers you can make with the second set of 3 digits in order from the largest number possible to the smallest number possible:

742, 724, 472, 427, 274, 247

Both sets had 3 digits in them.

Discuss and **explain** why it is possible to make more 3 digit numbers with the second set than with the first set.

1d) 8205

8520 8502 8250 8052 8025

5820 5802 5280 5208 5082 5028

2805 2580 2508 2085 2058

Challenge:

Robyn made a list of all the numbers she could think of that use these 4 digits.

Identify and **record** the 4 digit numbers that she has missed.

8205

2850

Preparation Task 2 (Class Video) Answers

Name: ____________________

2a)

I can use as many 20c, 10c and 5c coins as I like.

Find and **record** all the ways can I make 35c

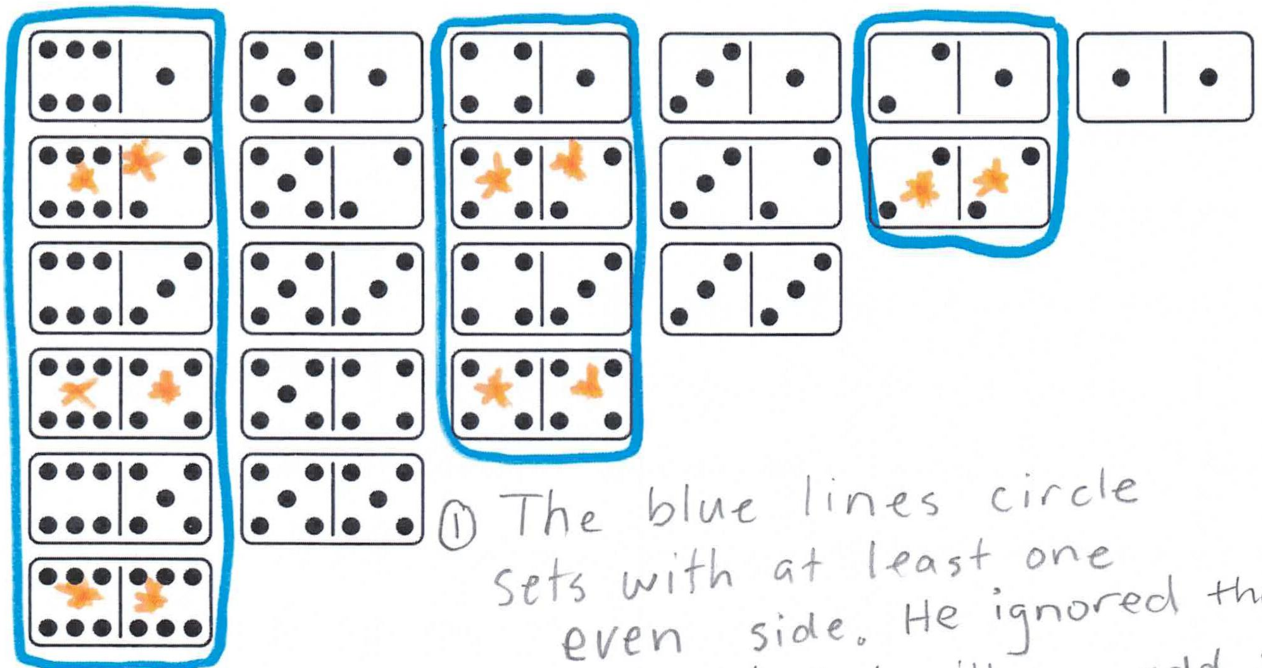
With one coin?	2 coins?	3 coins?	4 coins?
X	X	20c 10c 5c	10c 10c 10c 5c

5 coins?	6 coins?	7 coins?	8 coins?
10c 10c 5c 5c 5c	10c 5c 5c 5c 5c 5c	5c 5c 5c 5c 5c 5c 5c	X

2b)

Marc was asked to find dominoes that had an even number of spots on each side.

Discuss and **explain** why he drew the blue line and then why he drew the orange stars.



① The blue lines circle sets with at least one even side. He ignored the sets that started with an odd side.

② Marc used stars to show when both sides were even.

Preparation Task 3 Answers

Name: ____________________

3a)

Avis was asked to solve this problem:

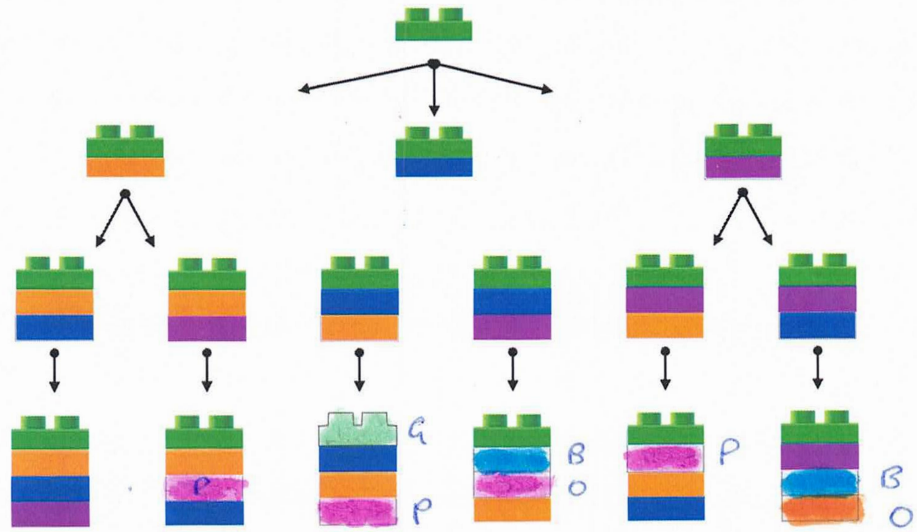
I have 4 blocks. They are green, blue, orange and purple.

How many different towers can I make that are 4 blocks high?

The green blocks must always be on top.

She drew a tree diagram to find the answer.

Review her diagram and **identify** what colour the grey blocks should be. **Colour** them correctly.



3b) **Challenge**

Bowen tried to find all the 4 digit numbers it is possible to make with 1, 3, 0 and 7.

He has not used a system to help him search.

Create your own organised list next to Bowen's work. You could start with the largest or smallest possible number.

Circle the numbers on your list that Bowen didn't find.

1730 1073
3071 7310 7130
7301 3107 3710
3701 3017
3170 7103 7031
1037 1370 1703

7310	3710	1730
7301	3701	1703
7130	3170	1370
7103	3107	1307
7031	3071	1073
7013	3017	1037