1) Task Card 1

Topaz has 3 birthday presents.

One present has a blue bow, one has a pink bow and the other one has an orange bow.

She is going to open them one by one.

How many different ways can she open her presents?

2) Task Card 2

Farmer Aster is going to put a new fence around a paddock.

The paddock is a square shape.

Farmer Aster will put a fence post in each corner and then 3 more fence posts on each side.

How many fence posts will Farmer Aster need?

3) Task Card 3

Calleigh and Mason have a secret they both know.

Calleigh tells the secret to 4 friends.

Mason tells the secret to twice as many friends as Calleigh did.

Altogether, how many people know the secret?

4) Task Card 4

Winston is climbing up the stairs to his bedroom.

On the 2nd step he drops his slipper.

Winston climbs up 3 more stairs before he sees that he has dropped his slipper.

He goes back for his slipper, and then climbs up 10 stairs to get to the top of the staircase.

How many steps are there on the staircase up to his bedroom?

5) Task Card 5

There are 5 street lights in a row.

Between each street light there is a car and 2 bicycles.

Altogether, how many wheels are in the row?

6) Task Card 6

Marcus is having a holiday in Melbourne.

He wants to visit the zoo, Luna Park, Scienceworks and Cooks' Cottage.

If his final stop is Luna Park, how many different ways can he visit the other locations?

7) Task Card 7

The Kelly family is having a party in a park.

They have 2 square picnic rugs and 2 triangular picnic rugs.

Someone goes and sits in each corner of a picnic rug.

2 people go and sit on each side of a picnic rug.

Altogether, how many people are sitting on the picnic rugs?

8) Task Card 8

Shana invited 3 friends and her sister to go to the movies.

Each of her friends invited 4 more people along.

Her sister invited some friends along too.

If 20 people came to the movies, how many friends did Shana's sister invite?

9) Task Card 9

Dale is shopping at the mall.

After buying a book he goes up 2 levels in a lift to level 4 where he buys a cap.

Dale then goes down 3 levels to have lunch at a cafe.

Dale wants to go to level 5 next.

How many levels away is he?

10) Task Card 10

Ian and Sue ate all 30 jelly beans in the packet.

Ian ate 6 more jelly beans than Sue.

How many did Sue eat?

1) Task Card 1

Topaz has 3 birthday presents.

One present has a blue bow, one has a pink bow and the other one has an orange bow.

She is going to open them one by one.

How many different ways can she open her presents?

Hint: How many different ways are possible if Topaz opens the blue present first?

2) Task Card 2

Farmer Aster is going to put a new fence around a paddock.

The paddock is a square shape.

Farmer Aster will put a fence post in each corner and then 3 more fence posts on each side.

How many fence posts will Farmer Aster need?

Hint: Draw the square

3) Task Card 3

Calleigh and Mason have a secret they both know.

Calleigh tells the secret to 4 friends.

Mason tells the secret to twice as many friends as Calleigh did.

Altogether, how many people know the secret?

Hint: Don't forget Calleigh and Mason

4) Task Card 4

Winston is climbing up the stairs to his bedroom.

On the 2nd step he drops his slipper.

Winston climbs up 3 more stairs before he sees that he has dropped his slipper.

He goes back for his slipper, and then climbs up 10 stairs to get to the top of the staircase.

How many steps are there on the staircase up to his bedroom?

Hint: Draw the stairs

5) Task Card 5

There are 5 street lights in a row.

Between each street light there is a car and 2 bicycles.

Altogether, how many wheels are in the row?

Hint: Draw the street lights

6) Task Card 6

Marcus is having a holiday in Melbourne.

He wants to visit the Melbourne Zoo, Luna Park, Scienceworks and Cooks' Cottage.

If his final stop is Luna Park, how many different ways can he visit the other locations?

Hint: Draw a tree diagram

7) Task Card 7

The Kelly family is having a party in a park.

They have 2 square picnic rugs and 2 triangular picnic rugs.

Someone goes and sits in each corner of a picnic rug.

2 people go and sit on each side of a picnic rug.

Altogether, how many people are sitting on the picnic rugs?

Hint: Draw the picnic rugs

8) Task Card 8

Shana invited 3 friends and her sister to go to the movies.

Each of her friends invited 4 more people along.

Her sister invited some friends along too.

If 20 people came to the movies, how many friends did Shana's sister invite?

Hint: Don't forget to include Shana

9) Task Card 9

Dale is shopping at the mall.

After buying a book he goes up 2 levels in a lift to level 4 where he buys a cap.

Dale then goes down 3 levels to have lunch at a cafe.

Dale wants to go to level 5 next.

How many levels away is he?

Hint: What level is the cafe on?

10) Task Card 10

Ian and Sue shared 30 jelly beans.

Ian ate 6 more jelly beans than Sue.

How many jellybeans did Sue eat?

Hint: Use counters as jellybeans

Task Card Answers

1) 6

2) 16

3) 14 people know the secret

4) 12

5) 32

6) 6

7) 42

8) 3

9) 4 levels away

10) 12 jellybeans

Challenge #1

In this diagram, 17 toothpicks are used to form a 2-square by 3-square rectangle.

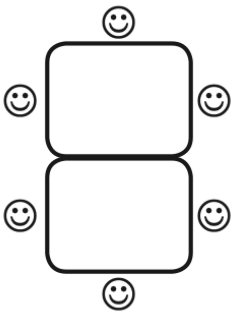
How many toothpicks would be needed to form a 6-square by 8-square rectangle?

Challenge #2

4 people can be seated at a single card table.

If two tables are placed end to end, 6 people can be seated as shown in the diagram.

How many tables must be placed end to end to seat 22 people?



Challenge #3

The floor of a rectangular room is completely covered with square tiles.

The room is 9 tiles long and 5 tiles wide.

Find the number of tiles that touch the walls or door of the room.

Challenge #4

A red counter is worth 25 cents and a blue counter is worth 5 cents.

Emma has 4 more red counters than blue counters.

The total value of her counters is $3.10.

How many blue counters does Emma have?

Challenge #5

On a standard circular 12-hour clock, the numerals 12 and 6 are opposite each other.

On the planet Bajor, they use a circular ten-hour clock with the numerals 1 to 10 equally spaced.

What pair of opposite numerals on a Bajorian clock has a sum of 11?

Solutions:

Challenge #1

110 toothpicks

In each row there is one more vertical toothpick than there are squares. This means a row that has 8 squares across would have 9 vertical toothpicks. Since the rectangle has 6 rows, there is a total of 6 × 9 = 54 vertical toothpicks. Each column has one more horizontal toothpick than there are squares. This means a column that has 6 squares down has 7 horizontal toothpicks. Since the rectangle has 8 columns, there is a total of 8 × 7 = 56 horizontal toothpicks.

54 + 56 = **110 toothpicks** are needed to form the 6-square by 8-square rectangle.

Challenge #2

10 tables

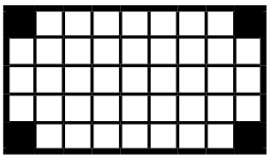
Remove the 2 people from the end seats. The remaining 20 people will be seated 2 to a table. This will require 10 tables. Reseating the 2 people in the end seats does not require any additional tables. Then 10 tables placed end to end will seat 22 people.

Challenge #3

24 tiles

Draw a diagram, and count the tiles that touch the edges.

24 tiles touch the walls.



Challenge #4

7 blue counters

After the blue counters are paired with red counters, there are 4 red counters left over, worth a total of $1.00.

The paired counters are worth $3.10 – $1.00 = $2.10.

Each pair is worth $0.05 + $0.25 = $0.30.

The number of pairs is 210 ÷ 30 = 7, so Emma has 7 blue counters.

Challenge #5

3 and 8

Draw the clock and construct a table

Number	1	2	**3**	4	5
Opposite	6	7	**8**	9	10
Sum	7	9	**11**	13	15

3 and 8 have a sum of 11.