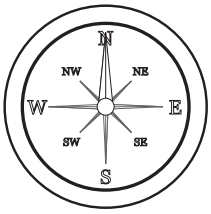
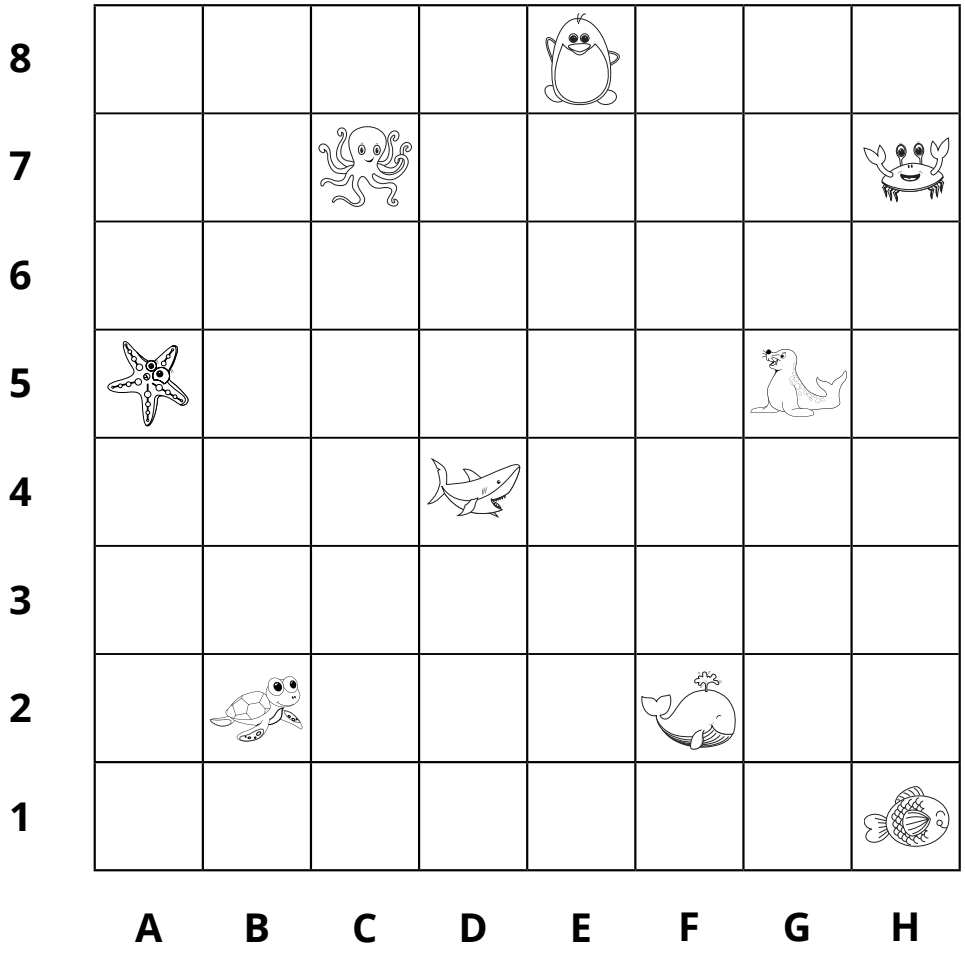
Name _____ **Date** _____

Compass Directions





1. Follow the compass directions and write what can be found at each location.

a) Start at B1. Move 4 squares north, 4 squares east and 2 squares north east. _____
b) Start at G8. Move 3 squares south west, 3 squares south and 2 squares east. _____
c) Start at H4. Move 3 squares north west, 4 squares west and 2 squares south. _____
d) Start at E5. Move 4 squares south, 3 squares north east and 3 squares south. _____
e) Start at E6. Move 2 squares south, 2 squares south west and 3 squares east. _____

2. Write compass directions from:

a) the turtle to the penguin

_____

b) the octopus to the whale

_____

c) the fish to the starfish

_____

teachstarter

Answers

1. Follow the compass directions and write what can be found at each location.

a) Start at B1. Move 4 squares north, 4 squares east and 2 squares north east. **crab**

b) Start at G8. Move 3 squares south west, 3 squares south and 2 squares east. **whale**

c) Start at H4. Move 3 squares north west, 4 squares west and 2 squares south. **starfish**

d) Start at E5. Move 4 squares south, 3 squares north east and 3 squares south. **fish**

e) Start at E6. Move 2 squares south, 2 squares south west and 3 squares east. w**hale**

Mixed Time Worksheets

There are three different time worksheet tasks in this pdf. We would like you to complete at least one of them for this task:

- Worded problems where you need to think about the time units being used (minutes, hours, days) and answer the questions using the correct time unit.

- Converting to and from 24 hour clock notation.

- A world time zones task that you will need to do some extra investigation for. Watch this for some help https://www.bbc.co.uk/bitesize/topics/zvsfr82/articles/zjk46v4

The answers to the first two worksheets are included. Please mark your work and correct any answers you may need to and give yourself a next step for this learning.

The Airport

You arrive at the airport at 1:50 pm and your flight leaves at 5:20 pm.

How many minutes will you need to wait?

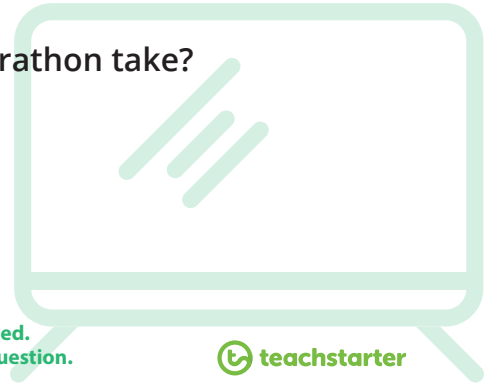
Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

TV Marathon

Sally decides to watch all of the Season 1 episodes of her favourite TV show, one after the other! There are eight 30 minute episodes in the season.

How many hours will her TV marathon take?



Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

30 Days

There are 30 days in September, April, June and November.

What are the total number of days in these 4 months?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

Netball Season

There are 4 quarters in a game of netball. Each quarter is 15 minutes long.

How many hours are there in a season of 10 netball games?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

Tablet Lessons

Erica earns pocket money by teaching her grandfather to use a tablet. After 3 months, Erica has earned £300.

If she keeps helping her grandfather, how much will she earn in 1 year?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

Egg Timer

Nigel's mum is having trouble boiling the perfect egg. She knows that she should cook it for 3 minutes, but her timer is measured in seconds.

How many seconds should Nigel's mum set her timer for?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

Watermelon Man

Jin Young went to the market to buy 22 watermelons. At the register, the cashier had to lift and weigh each watermelon separately. This took 30 seconds per watermelon.

How many minutes before the cashier had finished weighing all the melons?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

Busy Pigs

Once upon a time there were three little pigs. Each pig built a house. The straw house took 45 minutes to make, the stick house took an hour and the brick house took 75 minutes.

How many hours in total did the pigs work on their houses?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

Picking Apples

Jane picks apples all day. She earns £10 per basket of apples. She can fill 3 baskets in an hour.

If she works for 8 hours each day, how much money will she earn in two days?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

The Alien

An alien visits from a planet which uses different units of time called 'florbles'.

If one florble is the same as 4 Earth hours, how many florbles are there in an Earth day?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

Egyptian Summer

In Ancient Egypt, farmers knew that there were four 3 month seasons in a farming year. Months were measured by the moon cycle which was 28 days.

How many days were in one Egyptian summer?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

Amazing Man

Amazing Man can fly so quickly that he can fly to the moon and back in one hour. Mars is 48 times further away than the moon.

How many days would it take Amazing Man to make a return trip to Mars?

Identify which units of time are being used.
Convert the time units to answer each question.

teachstarter

Name: _____ Date: _____

Converting Time

1. Convert the following times from am/pm notation to 24-hour time.

a) 6:00 am _____ b) 2:30 pm _____

c) 10:30 pm _____ d) 12:07 am _____

e) 4:45 am _____ f) 8: 42 pm _____

g) 11:30 am _____ h) 3:01 am _____

i) 9:15 pm _____ j) 7: 06 pm _____

2. Convert the following times from 24-hour time to am/pm notation.

a) 02:00 _____ b) 15:45 _____

c) 07:21 _____ d) 00:30 _____

e) 13:13 _____ f) 16:52 _____

g) 05:55 _____ h) 09:43 _____

i) 21:00 _____ j) 19:59 _____

3. Circle the correct 24-hour conversion for these times.

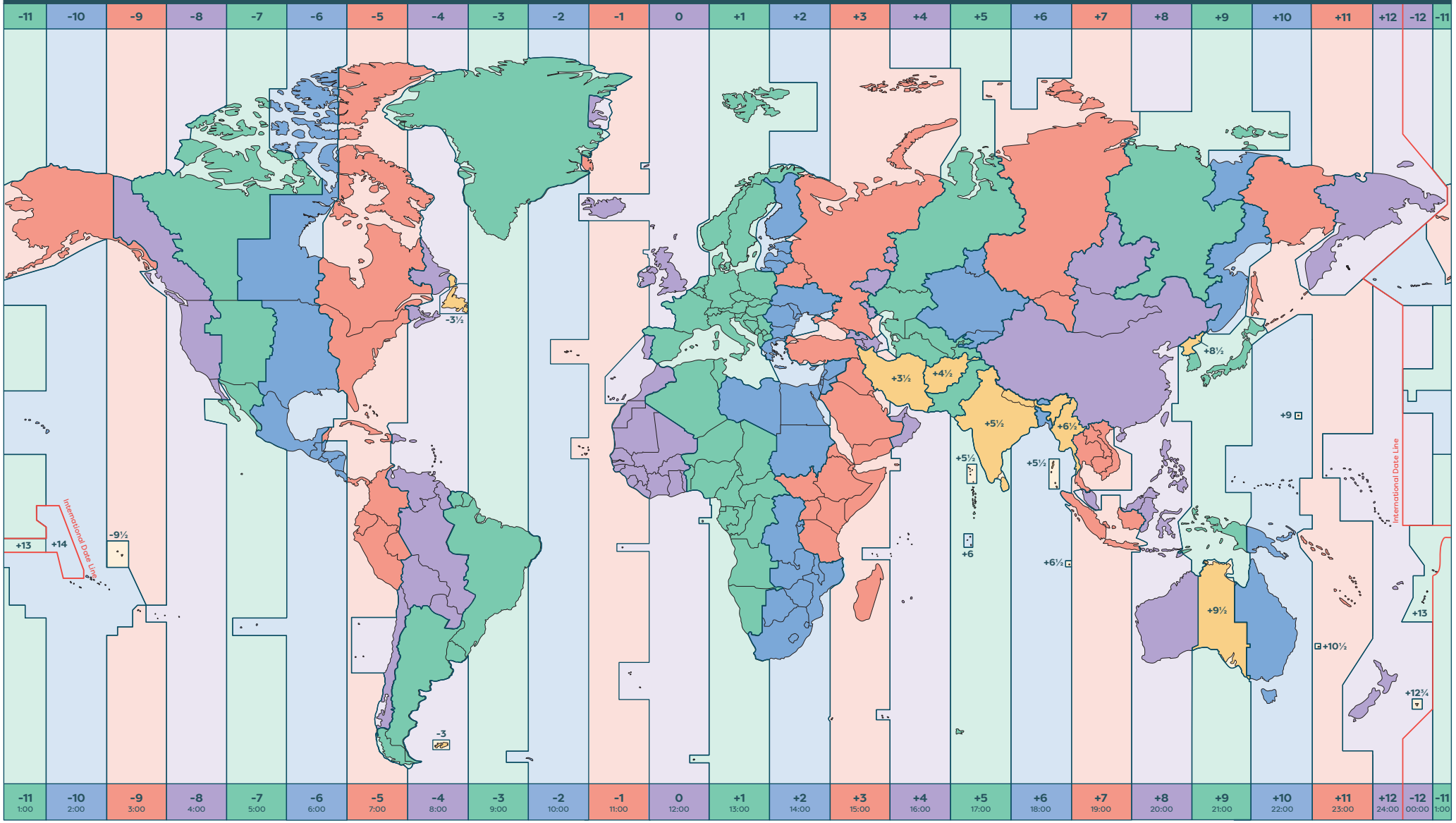
a) 6:45 pm	06:45	16:45	18:45
b) 8:08 am	20:08	08:08	10:08
c) 10:32 pm	22:32	10:32	19:32
d) 12:02 am	12:02	00:02	24:02

4. Circle the correct am/pm conversion for these times.

a) 09:27	9:27 pm	9:27 am	7:27 am
b) 21:00	9:00 pm	6:00 pm	6:00 am
c) 14:30	2:30 am	4:30 pm	2:30 pm
d) 03:28	3:28 am	1:28 am	3:28 pm

TeachStarter.com

TIME ZONES WORLD MAP



Time Zone Variations

Irregular time zones

teachstarter

World Time Zones

Use the time zone map to create a set of five questions (and answers!) you could ask someone to test their knowledge of geography and time zones.

Some things to think about …

- World time works around GMT (Greenwich Mean Time, represented by the blue 0 strip in the middle). The + and – are the hours differences between GMT and the country covered. So France is in the +1 green strip and are 1 hour ahead of our time (we are in the 0 blue strip).
- The countries on the map aren't labelled so you will need to do some investigation for yourself to find the names of the countries!
- The map has colours for each time zone and the countries and areas of countries they cover. Some countries are so big, they have more than one time zone.
- You can use a computer or a phone (clock function) to check your answers.

Time Units Questions - Answers

The Airport – 210 minutes

TV Marathon – 4 hours

30 Days – 120 days

Netball Season – 10 hours

Tablet Lessons - £1200

Egg Timer – 180 seconds

Watermelon Man – 11 minutes

Busy Pigs – 3 hours

Picking Apples - £480

The Alien – 6 florbles

Egyptian Summer – 84 days

Amazing Man – 2 days

Name: _____ Date: _____

Answers

1. Convert the following times from am/pm notation to 24-hour time.

a) 6:00 am **06:00**

b) 2:30 pm **14:30**

c) 10:30 pm **22:30**

d) 12:07 am **00:07**

e) 4:45 am **04:45**

f) 8: 42 pm **20:42**

g) 11:30 am **11:30**

h) 3:01 am **03:01**

i) 9:15 pm **21:15**

j) 7: 06 pm **19:06**

2. Convert the following times from 24-hour time to am/pm notation.

a) 02:00 **2:00 am**

b) 15:45 **3:45 pm**

c) 07:21 **7:21 am**

d) 00:30 **12:30 am**

e) 13:13 **1:13 pm**

f) 16:52 **4:52 pm**

g) 05:55 **5:55 am**

h) 09:43 **9:43 am**

i) 21:00 **9:00 pm**

j) 19:59 **7:59 pm**

3. Circle the correct 24-hour conversion for these times.

a) 6:45 pm	06:45	16:45	**18:45**
b) 8:08 am	20:08	**08:08**	10:08
c) 10:32 pm	**22:32**	10:32	19:32
d) 12:02 am	12:02	**00:02**	24:02

4. Circle the correct am/pm conversion for these times.

a) 09:27	9:27 pm	**9:27 am**	7:27 am
b) 21:00	**9:00 pm**	6:00 pm	6:00 am
c) 14:30	2:30 am	4:30 pm	**2:30 pm**
d) 03:28	**3:28 am**	1:28 am	3:28 pm

TeachStarter.com

Open Ended Problems

Please read the first page carefully. We are expecting you to show, draw, write, explain however you want to how you got to the answers you have! This is part of this learning.

The answers are included at the end of this task for you to check and mark your own work before you hand it in. Please correct any answers that need to be and ensure you make a note of how your understanding of the problem has changed after correcting it.

Notes

- These open-ended problem solving cards are designed to make you think and give us thoughtful and creative responses.
- More than one answer is acceptable and we want you to explore different possibilities.
- Read through all the ones we have given you and pick at least four to try.

TeachStarter.com

Julian was doing his homework. His brother was helping him.

Julian said, “If you add an odd number to an even number, the answer is always odd.”

“How do you know that?” asked his brother.

“Because 3 + 6 = 9. The number 3 is odd. 6 is even. 9 is odd. That means it always works.”

Is Julian right? Is this statement always true?
Why or why not?

Mei is playing a lucky numbers game. She must pick three numbers out of a bag.

The numbers in the bag are: 12, 8, 15, 2, 11 and 9.

Mei will win a prize if the three numbers add up to a number less than 20; if the three numbers add up to a multiple of five; or if the three numbers add up to a number greater than 30.

List some winning combinations of numbers.

George has chosen a random card from a pack of number cards.

His number is even.

His number is less than 180 but greater than 120.

His number is a multiple of 2, but does not end in a 4 or an 8.

List some of the possible numbers that could be on George’s card.

Pedro’s grandmother has made 32 cookies for Pedro to share equally with some friends.

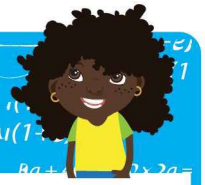
How many friends could Pedro share his cookies with?

How many cookies would each friend receive?

List some possibilities.

Make sure every friend receives the same number of cookies.

PROBLEM SOLVING



Davina's family have just opened an Italian restaurant. They have enough space for 72 diners.

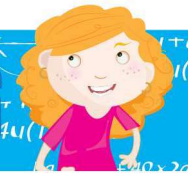
Draw two possible floor plans, showing two different ways of how the tables might be arranged.

The fewest amount of people per table is 2.

The greatest amount of people per table is 8.

There must be a variety of table sizes in the restaurant.

PROBLEM SOLVING



Petunia loves planting colourful flowers in her flower garden.

Today, she has 2 yellow flowers, 3 red flowers, 4 orange flowers and 1 pink flower.

She wants to plant them in a straight line along the front of her garden.

Draw some possible flower arrangements.

Is it possible to draw a line of flowers so that no two flowers of the same colour are together?

PROBLEM SOLVING

Heather is thinking of a five-digit number.

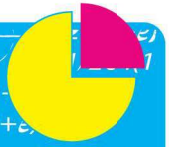
The number is greater than 33 000 and less than 34 000.

The digit in the hundreds column is the same as the digit in the units column.

All of the digits in the number are odd.

What could Heather's number be? List some possibilities.

PROBLEM SOLVING



Using the numbers 1, 2, 4, 5 and 10, create at least five different fractions.

Try and use a variety of numerators and denominators.

Write your fractions in ascending and descending order.

Place your fractions on a number line between 0 and 1.

Draw a picture which represents each fraction.

Open Ended problems

Yellow 1
Juilan's homework

Julian is right

When we add (or subtract) odd or even numbers the results are always:

Operation	Result	Example (red is odd, blue is even)
Even + Even	Even	2 + 4 = 6
Even + Odd	Odd	6 + 3 = 9
Odd + Even	Odd	5 + 12 = 17
Odd + Odd	Even	3 + 5 = 8

(The same thing happens when we subtract instead of adding.)

Yellow 2
Mei's lucky numbers game

Numbers that add to less than 20: 8, 2 and 9
Numbers that add up to a multiple of 5: (12, 8, 15) (15, 1, 9) (8, 2, 15). Hint: you need to find 3 numbers that add up to a number ending in 0 or 5.
Numbers that add up to a number greater than 30: (12, 15, 11) (15, 11, 8) (15, 11, 9) (11, 9, 12) (12, 8, 15) (12, 8, 11) (15, 9, 8) (15, 9, 12)

Yellow 3
Georges random cards

122, 126, 130, 132, 136, 140, 142, 146, 150, 152, 156, 160, 162, 166, 170, 172, 176

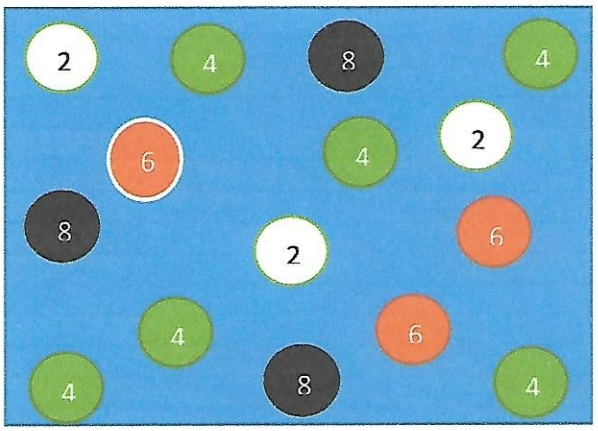
Yellow 4
Pedro's cookies

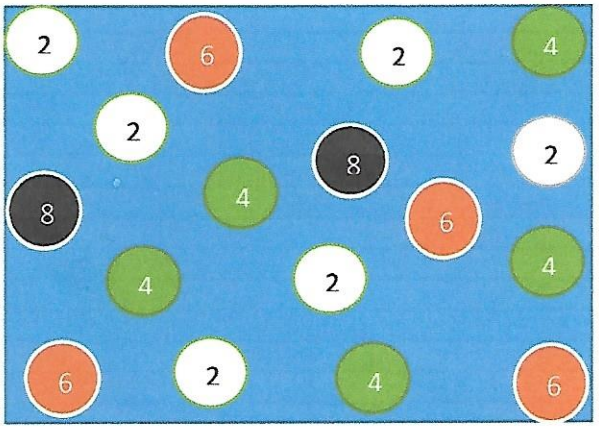
Pedro and 31 friends = 1 cookie each
Pedro and 7 friends = 4 cookies each
Pedro and 3 friends = 8 cookies each
Pedro and 15 friends = 2 cookies each
Pedro and 1 friend = 16 cookies each

Blue 1

Davina's restaurant

There are lots of different combinations but here's two as an example.

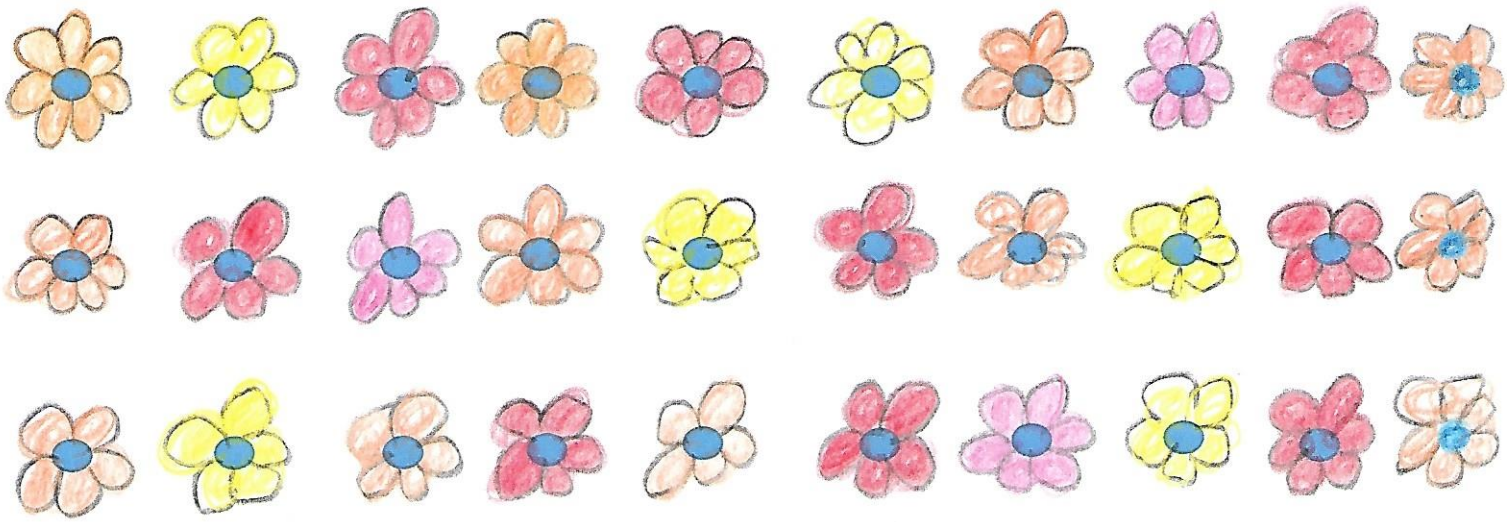




Blue 2

Petunia's flowers

Again there are lots of combinations but here's 3 as an example;



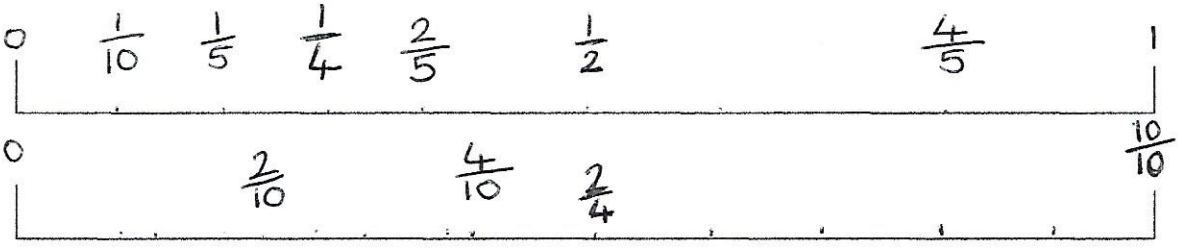
Blue 3

Heathers number

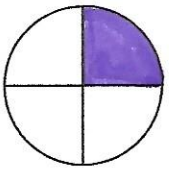
33111	33313	33515	33717	33919
33131	33333	33535	33737	33939
33151	33353	33555	33757	33959
33171	33373	33575	33777	33979
33191	33393	33595	33797	33999

Blue 4
Fractions

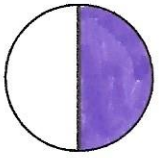
$\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{5}$ $\frac{1}{10}$ $\frac{2}{4}$ $\frac{2}{5}$ $\frac{2}{10}$ $\frac{4}{5}$ $\frac{4}{10}$ $\frac{10}{10}$



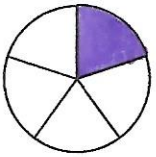
1/4



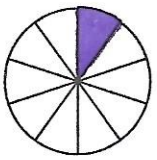
1/2



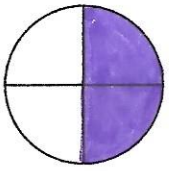
1/5



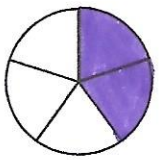
1/10



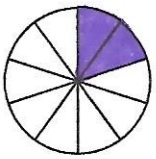
2/4



2/5



2/10



4/5

4/10

10/10