Lots of DATA 6 ANSWERS

SHOE SIZE	Frequency
4	3
5	5
6	6
7	4
8	2

Big List is

4,4,4 — 12
5,5,5,5,5 — 25
6,6,6,6,6,6 — 36
7,7,7,7 — 28
8,8 — 16
117

mean = 117÷20
= 5.85

Jude collected the shoe sizes of students in his class.

(a) What is the mean shoe size?

(b) Another student joins the class.

His shoe size is 8 .

Will the mean change if his data is included?

Yes it would change.

New mean = 125÷21=

AGE	Frequency
14	1
15	7
16	8
17	3
18	1

Big List is

14 x 1 — 14
15 x 7 — 105
16 x 8 — 128
17 x 3 — 51
18 x 1 — 18
316

mean = 316÷20
= 15.8

Zoe collected the ages of students in her football team

(a) What is the mean age?

(b) Another girl joins the team

She says that the mode will change if she is included.

What age could she be?

Must be 15 years old.

Flavour	Frequency
Salted	4
BBQ	8
Chilli	5
Chicken	3

Some students were asked what was favourite flavour of crisps.

There are 20

What is the probability that someone chose BBQ?

P(BBQ) = $^{8}/_{20}$

What is the probability of Chicken?

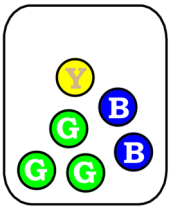
P(chicken) = $^{3}/_{20}$

What is the probability of not picking Salted?

P(not salted) = $^{16}/_{20}$

What is the probability of Chilli or BBQ?

P(Chilli or BBQ) = $^{13}/_{20}$



Some counters are mixed in a bag.

At random a counter is picked.

What is the probability of picking a Blue (B)?

P(Blue) = $^{2}/_{6}$

What is the probability of picking a Red (R)?

P(Red) = $^{0}/_{6}$ = 0

What is the probability of picking a Blue or Green?

P(Blue or Green) = $^{5}/_{6}$

What is the probability of not picking a Blue ?

P(not Blue) = $^{5}/_{6}$

P I N E A P P L E

9 cards have some letters written on them.

They are shuffled together and then a card is drawn at random.

What is the probability of picking a P?

P(Pick P) = $^{3}/_{9}$

What is the probability of picking a S?

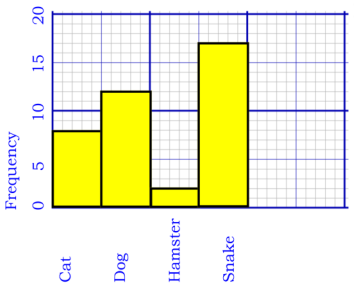
P(Pick S) = $^{0}/_{9}$ =0

What is the probability of picking a P or E?

P(Pick P or E) = $^{4}/_{9}$

What is the probability of not picking a P?

P(not P) = $^{6}/_{9}$



A survey was done about favourite pets.

What is the probability that someone picked snake?

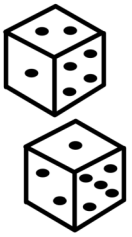
p(snake) =$^{17}/_{39}$

What is the probability that some did not pick cat?

p(not cat) = $^{31}/_{39}$

What is the probability of not picking a snake?

p(not snake) = $^{22}/_{39}$



2 normal fair dice are thrown together.

Fill in the possibility space when the scores are added.

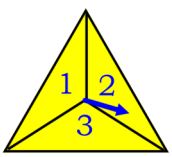
+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

What is the probability of scoring total of 6? p(total 6) =$^{5}/_{36}$

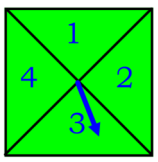
What is the probability of getting more than 9? p(more than 9) = $^{6}/_{36}$

These 2 spinners are used together.

Fill in this possibility space when the results are added.



+	1	2	3
1	2	3	4
2	3	4	5
3	4	5	6
4	5	6	7



What is the probability of scoring 5?

p(total 5) = $^{3}/_{12}$

What is the probability of getting an odd number?

p(odd) = $^{6}/_{12}$

SHOE SIZE	Frequency
4	3
5	5
6	6
7	4
8	2

mode is most common

median is half way through the 20 data items

median is 10th data value

Jude collected the shoe sizes of students in his class.

(a) What is the modal shoe size?

(b) What is the median shoe size?

(c) Another student joins the class.

His shoe size is 8 .

Will the mode or the median change if his data is included?

(a) mode=6

(b) median=6

(c) mode will not change

median will not change

AGE	Frequency
14	1
15	7
16	8
17	3
18	1

mode is most common

median is half way through the 20 data items

median is 10th data value

Zoe collected the ages of students in her football team

(a) What is the modal age?

(b) What is the median age?

(c) Another girl joins the team

She says that the mode will change if she is included.

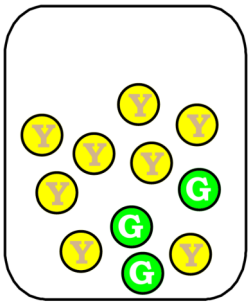
What age could she be?

(a) mode=16

(b) median=16

(c) She must be 15.

Mode will change to 155 and 16



Some counters are in a bag.

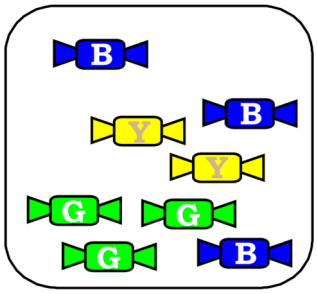
Can you add some counters so that the probability of getting GREEN is 0.5

There are different possible answers.

Could be 5 Green which would be 8 Yellow and 8 Green

Or could be 6 Green and 1 Yellow which would then have 9 Yellow and 9 Green

Or could be other answers too.



Some sweets are in a jar.

What sweets do you need to add to the jar so that the probability of blue is $^1/_3$?

There are different possible answers.

1 of different..... which gives 3 blue and 6 others

or

1 blue and 3 more of a different colour which gives 4 blue and 8 others

or lots of other possible.

Beef	Salted	BBQ	Cheese	Chicken
0.17	0.21	0.15	0.05	0.42

This table shows the probability of different flavours of crisps.

Fill in the missing probability for Chicken.

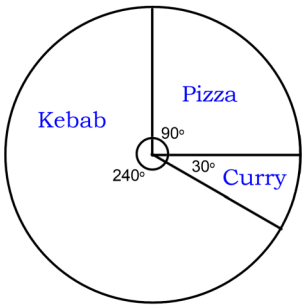
p(chicken) =1- 0.17 - 0.21 - 0.15 - 0.05 = 0.42

What is the probability of not picking BBQ?

p(not BBQ) = 1 - 0.15 = 0.85

What is the probability of not picking Cheese?

p(not Cheese) = 1 - 0.05 = 0.95



Here is a pie chart that shows favourite meal.

What is the probability that someone did not pick Pizza?

p(not pizza) =$^{210}/_{360}$

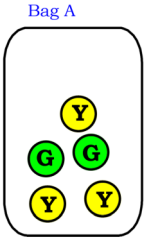
What is the probability that someone picked Curry or Pizza?

p(curry or pizza) = $^{120}/_{360}$

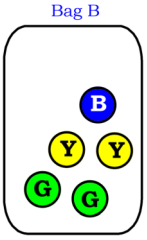
What is the probability someone did not pick Kebab?

p(not kebab) = $^{120}/_{360}$

Bag A



Bag B



A counter is taken from each bag.

The colour of each is noted.

Fill in the possibility space.

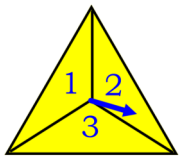
Bag B \ Bag A	Y	Y	Y	G	G
Y	YY	YY	YY	GY	GY
Y	YY	YY	YY	GY	GY
G	YG	YG	YG	GG	GG
G	YG	YG	YG	GG	GG
B	YB	YB	YB	GB	GB

What is the probability of getting 2 yellows?

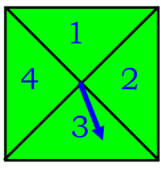
p(2 yellows) = $^6/_{25}$

These 2 spinners are used together.

Fill in this possibility space when the results are multiplied



x	1	2	3
1	1	2	3
2	2	4	6
3	3	6	9
4	4	8	12



What is the probability of scoring 4?

p(score 4) = $^2/_{12}$

What is the probability of getting an odd number?

p(odd) = $^4/_{12}$