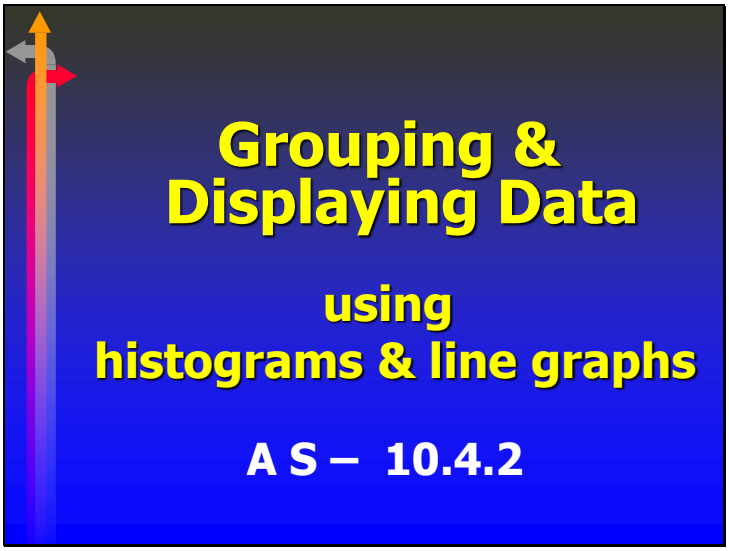
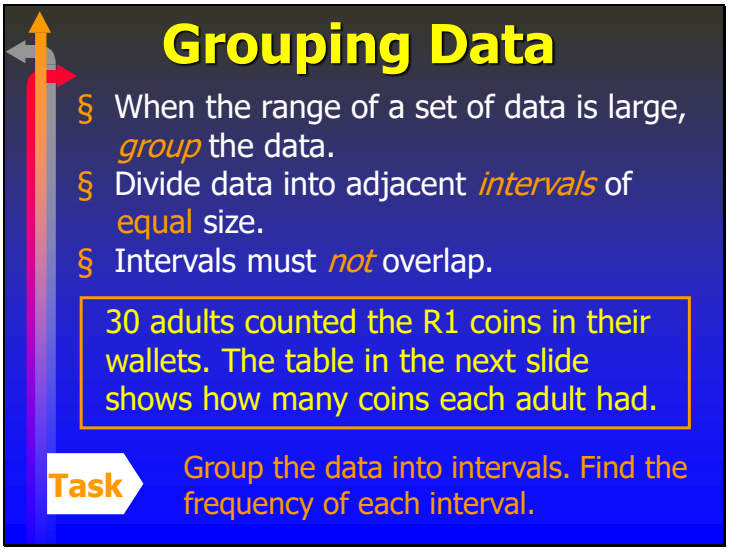
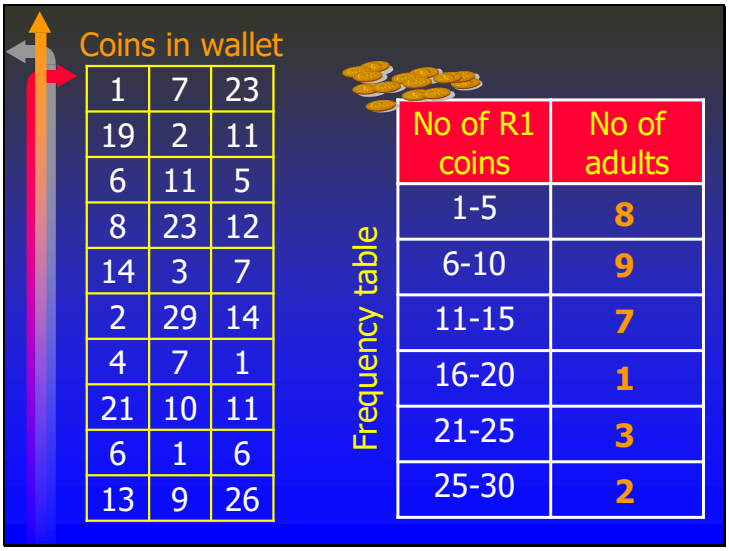
Slide 1


Grouping &
Displaying Data
using
histograms & line graphs
A S – 10.4.2

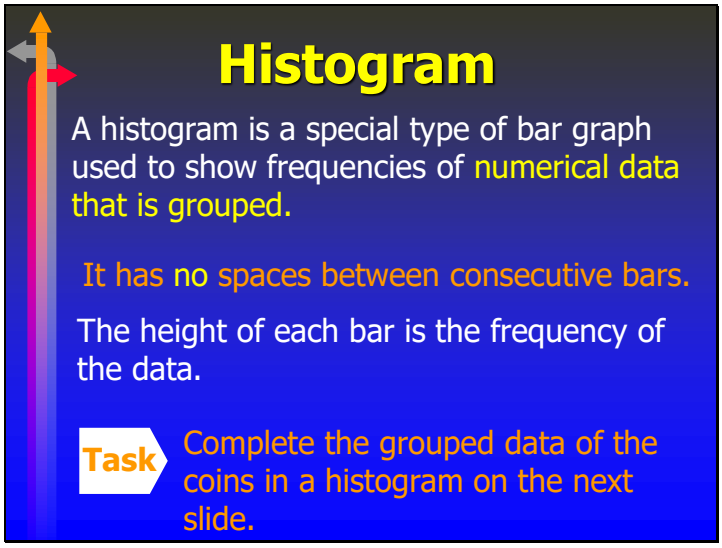
Slide 2


Grouping Data
§ When the range of a set of data is large, group the data.
§ Divide data into adjacent intervals of equal size.
§ Intervals must not overlap.
30 adults counted the R1 coins in their wallets. The table in the next slide shows how many coins each adult had.
Task
Group the data into intervals. Find the frequency of each interval.

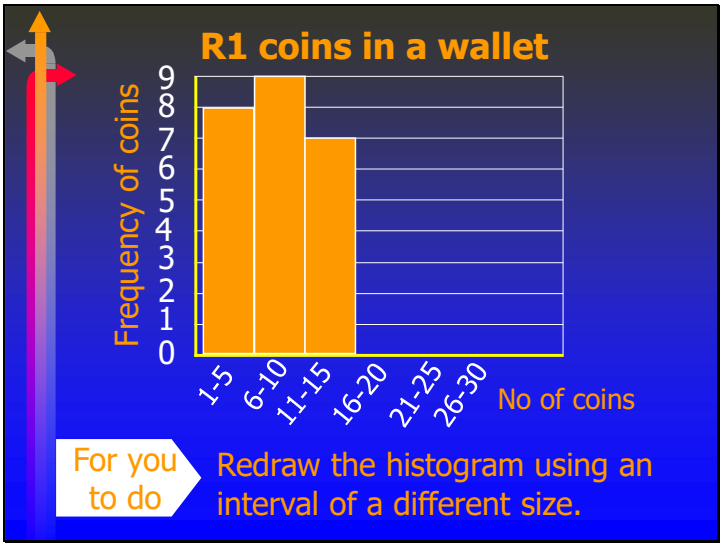
Slide 3


Coins in wallet
1 7 23
19 2 11
6 11 5
8 23 12
14 3 7
2 29 14
4 7 1
21 10 11
6 1 6
13 9 26
Frequency table
No of R1 coins
No of adults
1-5
8
6-10
9
11-15
7
16-20
1
21-25
3
25-30
2

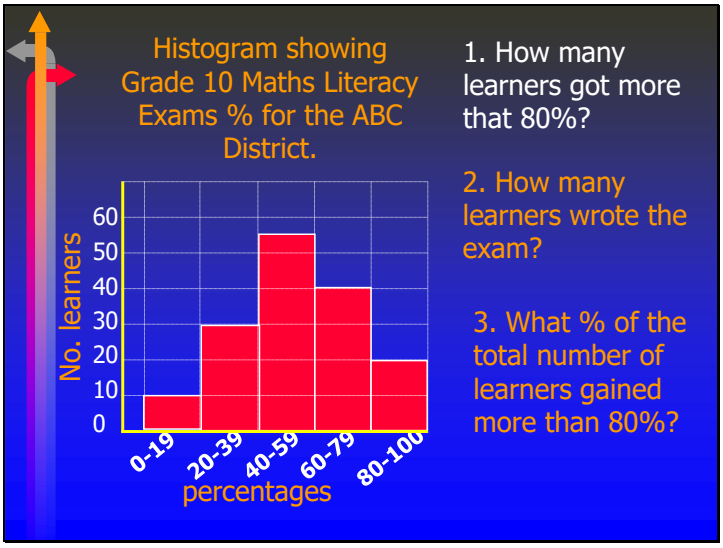
Slide 4


Histogram
A histogram is a special type of bar graph used to show frequencies of numerical data that is grouped.
It has no spaces between consecutive bars.
The height of each bar is the frequency of the data.
Task
Complete the grouped data of the coins in a histogram on the next slide.

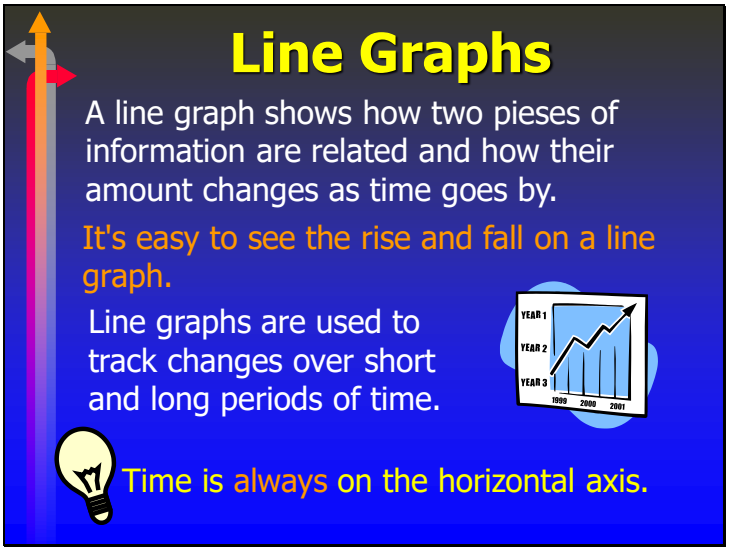
Slide 5


R1 coins in a wallet
Frequency of coins
9
8
7
6
5
4
3
2
1
0
1-5
6-10
11-15
16-20
21-25
26-30
No of coins
For you to do
Redraw the histogram using an interval of a different size.

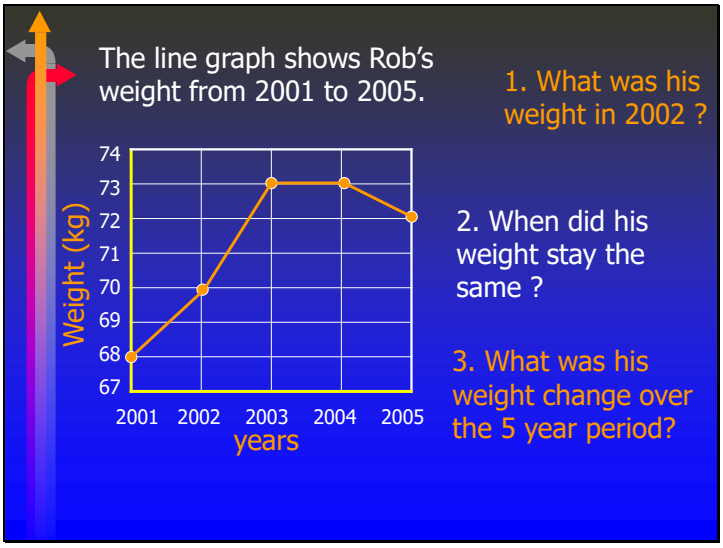
Slide 6


Histogram showing Grade 10 Maths Literacy Exams % for the ABC District.
No. learners
60
50
40
30
20
10
0
0-19
20-39
40-59
60-79
80-100
percentages
1. How many learners got more that 80%?
2. How many learners wrote the exam?
3. What % of the total number of learners gained more than 80%?

Slide 7


Line Graphs
A line graph shows how two pieses of information are related and how their amount changes as time goes by.
It's easy to see the rise and fall on a line graph.
Line graphs are used to track changes over short and long periods of time.
YEAR 1
YEAR 2
YEAR 3
1999
2000
2001
Time is always on the horizontal axis.

Slide 8


The line graph shows Rob's weight from 2001 to 2005.
1. What was his weight in 2002 ?
Weight (kg)
74
73
72
71
70
69
68
67
2001
2002
2003
2004
2005
years
2. When did his weight stay the same ?
3. What was his weight change over the 5 year period?

Slide 9

Multiple Line Graphs

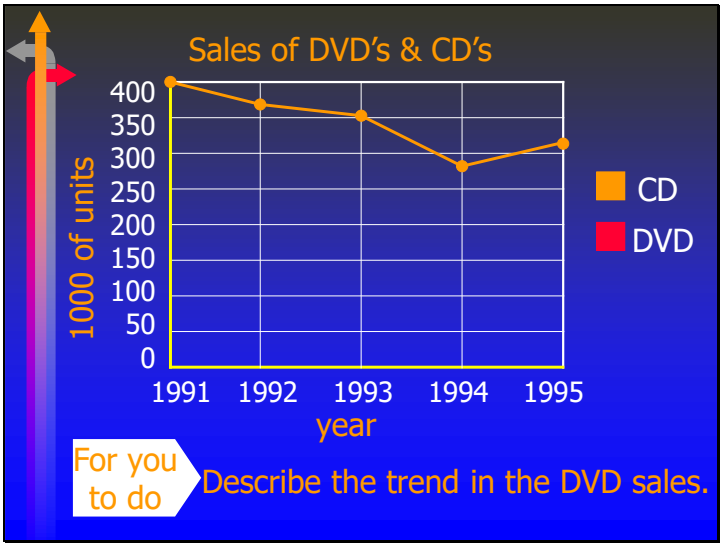
Sales of DVD & CD's cassettes (in 1000 units)

year	CD	DVD
1991	400	100
1992	375	180
1993	350	230
1994	275	270
1995	310	350

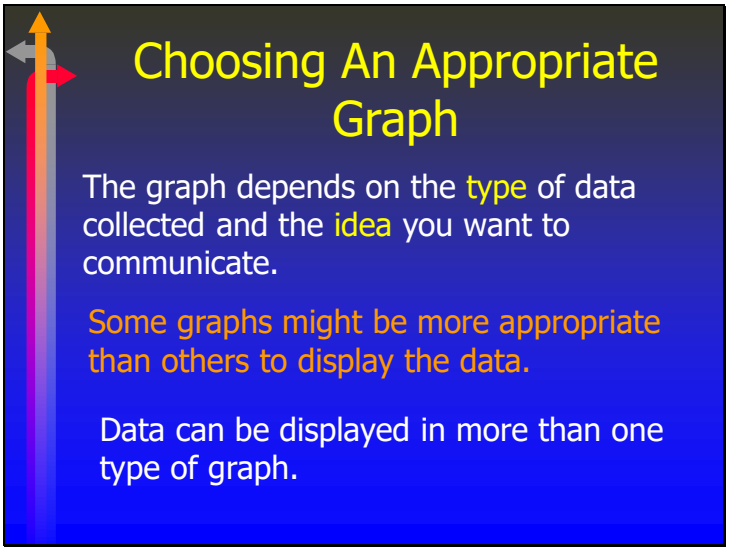
Task

Display the data on the left in a multiple line graph on the next slide, The data for CDs has been completed for you already

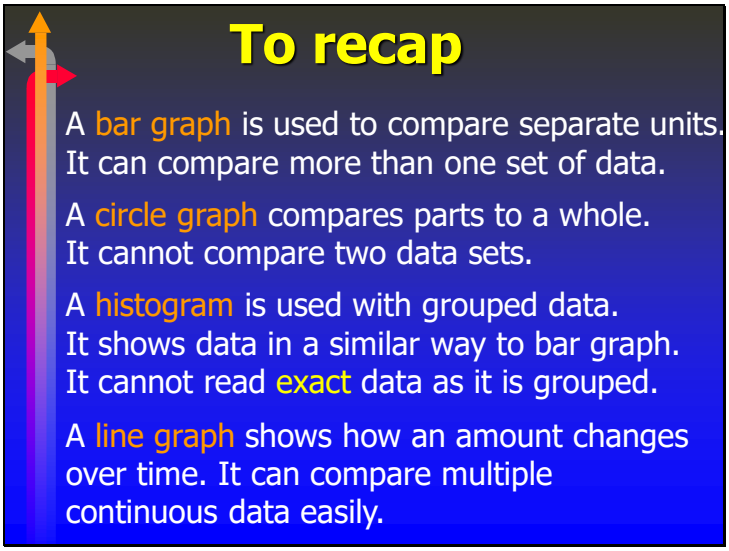
Slide 10


Sales of DVD's & CD's
400
350
300
250
200
150
100
50
0
1000 of units
1991
1992
1993
1994
1995
year
CD
DVD
For you to do
Describe the trend in the DVD sales.

Slide 11


Choosing An Appropriate Graph
The graph depends on the type of data collected and the idea you want to communicate.
Some graphs might be more appropriate than others to display the data.
Data can be displayed in more than one type of graph.

Slide 12


To recap
A bar graph is used to compare separate units. It can compare more than one set of data.
A circle graph compares parts to a whole. It cannot compare two data sets.
A histogram is used with grouped data. It shows data in a similar way to bar graph. It cannot read exact data as it is grouped.
A line graph shows how an amount changes over time. It can compare multiple continuous data easily.