

Description of graphs

TASK 1 Discussion

Look at the graph below and try to answer the following questions

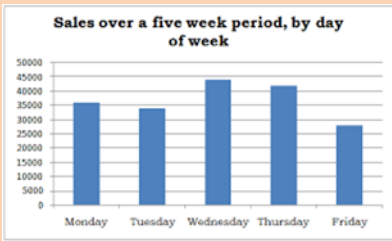
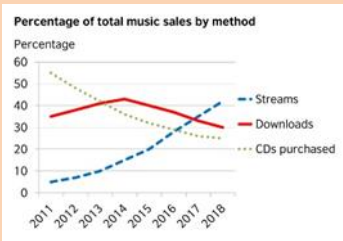
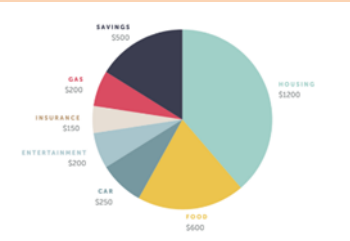
1. What type of graph is it? Do you know any other types of graphs?
2. What does the graph show?
3. What do the numbers on the horizontal axis mean?
4. What do the numbers on the vertical axis refer to?
5. Which country did better in the first decade?
6. Which country did better in the second decade?
7. What caused the rises and falls in the unemployment rate?



Source: <https://www.theglobaleconomy.com/compare-countries/>

TASK 2 GRAPHS & CHARTS

Data can be represented in many ways. The main types of graphs are a bar graph or **bar chart**, **line graph**, and **pie chart**.

		
<p>A bar chart is a visual tool that uses bars to compare data among categories. A bar graph may run</p>	<p>Line graphs represent how data has changed over time. They are useful to demonstrate trends or numbers</p>	<p>A pie chart shows data as a percentage of a whole. This kind of visualisation uses a circle to</p>

<p>horizontally or vertically. The important thing to know is that the longer the bar, the greater its value.</p> <p>Bar graphs display data in a way that is similar to line graphs, but they are better for comparing larger changes or differences in data among groups.</p> <p>Bar graphs are an extremely effective visual to use in presentations and reports. They are popular because they allow the reader to recognize patterns or trends far more easily than looking at a table of numerical data.</p>	<p>that are connected, e.g., how sales varied over a year. Line graphs can also be used to compare changes over the same period of time for more than one group. They are better to describe smaller changes.</p> <p>Line graphs are used across many different fields. In finance, for example, line graphs are used to create visual representations of values over time, including changes in the prices of securities.</p>	<p>represent the whole, and slices of that circle, or “pie”, to represent the specific categories that compose the whole. Pie charts do not show changes over time.</p> <p>Pie charts are often used in business, e.g., showing percentages of types of customers, percentage of revenue from different products, and profits from different countries.</p> <p>Pie charts are best for displaying simple data sets, where the number of categories is small (usually no more than six) and the differences between them are clear and significant.</p>
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Axes

Graphs have two **axes**, the lines that run across the bottom and up the side. The line along the bottom is called the horizontal or **x-axis**, and the line up the side is called the vertical or **y-axis**.

The x-axis may contain categories or numbers and is read from the bottom left of the graph.

The y-axis usually contains numbers, again starting from the bottom left of the graph.

The numbers on the y-axis generally, but not always, start at 0 in the bottom left of the graph, and move upwards. Usually, the axes of a graph are **labelled** to indicate the type of data they show.

How to describe diagrams and other visuals

To describe graphs as clearly as possible, each visual element should be named. For example:

The vertical axis shows...

The horizontal axis represents...

This **curve** illustrates...

The **solid line** shows...

The area describes...

This coloured segment refers to...

How to describe a bar graph

Bar graphs divide the data into separate bars and **track** progress over time. To describe the graph, follow the trend from left to right and describe if it goes down, up, or stays the same.

How to describe a line graph

A line graph **visualizes** data in a single line over time to represent trends, changes, or relationships between objects, numbers, dates, etc. These lines show movement over time affected by the increase or decrease in the key factors.

To express the movement of the line, appropriate verbs, adjectives, and adverbs should be used depending on the kind of action that needs to be shown. The following vocabulary may be used:

Verbs: boom, climb, collapse, crash, decline, decrease, dip, drop, fall, go down, go up, grow, increase, level off, maintain the same level, peak, plummet, plunge, reduce, remain stable, remain steady, rise, stay constant, soar, stagnate...

Adjectives: abrupt, considerable, dramatic, gentle, gradual, huge, massive, minimal, moderate, rapid, sharp, significant, slight, slow, small, steady, sudden, substantial...

Adverbs to describe the degree or speed of a change: abruptly, considerably, dramatically, gently, gradually, massively, minimally, moderately, rapidly, sharply, significantly, slightly, slowly, steadily, suddenly, substantially...

The following prepositions are used when describing a graph. For detailed information, watch this [video](#).

The number of employees decreased **from** 50 **to** 45.

The number of employees fell **by** 5.

That was a decrease **in** the number of employees.

Sales of furniture stood **at** 10,000 units **in** January.

Sales increased **by** 5,000 units **between** February **and** April.

Sales rose **from** 10,000 units in February **to** 15,000 units in April.

There was an increase **of** 5,000 units.

Sales peaked **at** 20,000 units in October.

Energy prices have been rising **since** December 2021.

Oil prices have been increasing **for** 7 months in a row.

To express cause and effect: result in, lead to, cause; thanks to, because of, due to. For example:

The campaign resulted in a significant rise in sales.

The carbon tax will lead to an increase in energy bills.

The turnover is higher this year thanks to growing exports.

This increase is due to the strong economy.

How to describe a pie chart

A pie chart presents data in separate sections to show which individual parts make up the whole. To describe the chart, compare each "slice" of the chart to the others to determine what share of the total each category has while using the following phrases:

The pie chart shows .../ provides information about...

The pie chart is divided into 5 categories / segments/...

Each category / segment represents...

Middle-aged women **account for** 68% of all our customers, followed by ...

If we compare.../ compared to...

The majority of..... / only a small minority of...

More than / greater than / less than....

VOCABULARY TASK 1

Put the following verbs into the appropriate categories. Then watch the [video](#) for 2 minutes and check your answers. Also, see the degree and speed adverbs while watching the video.

go down	fall	stay constant	drop	grow	remain unchanged	climb	decrease	plummet
go up	jump	stay stable	soar	plunge	remain steady	rise	increase	decline

UPWARD MOVEMENT	DOWNWARD MOVEMENT	NO CHANGE

VOCABULARY TASK 2

In order to be able to describe graphs more precisely, we may switch between using a **verb + adverb** and **adjective + noun**. See examples:

- a) Energy prices **fell significantly** = **verb** (fell) + **adverb** (significantly)
- b) There was **a significant fall** in energy prices = **adjective** (significant) + **noun** (fall)

For each verb in the table, write a noun made from the verb. Then, watch [extract 1](#) and [extract 2](#) from the video and check your answers.

VERB	NOUN	VERB	NOUN
to drop		grow	
fall		improve	
rise		fluctuate	
decline		vary	
increase		reduce	
decrease		lose	

VOCABULARY TASK 3

Each chart below shows a different trend. First, think of how to describe each chart by using a) **verb + adverb** and b) **adjective + noun** (e.g. a) *drop slightly*; b) *a slight drop*). You may write your answers down.

After you have written down your answers, watch the [video](#). Note that it only has suggested answers, you may use different vocabulary, which is also correct.

IELTS - ACADEMIC WRITING

DESCRIBING TRENDS - VOCABULARY & WORD ORDER



1a
1b

www.grammar.cl



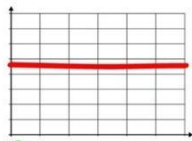
2a
2b

www.woodwardenglish.com

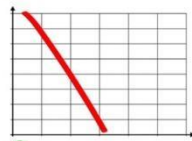


3a
3b

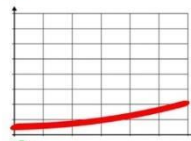
www.vocabulary.cl



4a
4b



5a
5b

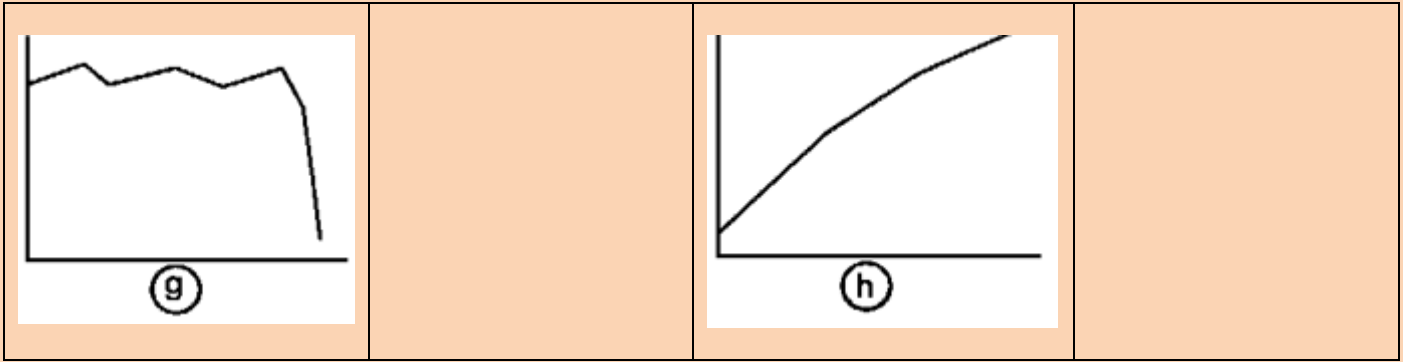


6a
6b

VOCABULARY TASK 4

Match each sentence below with one of the following graphs.

<p style="text-align: center;">a</p>		<p style="text-align: center;">b</p>	
<p style="text-align: center;">c</p>		<p style="text-align: center;">d</p>	
<p style="text-align: center;">e</p>		<p style="text-align: center;">f</p>	



1. The investment level rose suddenly.
2. The sales of our products fell slightly in the final quarter.
3. The Research and Development budget has stabilized over the past few years.
4. At the end of the first year, sales stood at 50 per cent of the present level.
5. The price reached a peak before falling a little and then maintaining the same level.
6. There has been a steady increase in costs over several years.
7. The sudden collapse in share prices has surprised everyone.
8. The value of the shares has shown a steady decline.

VOCABULARY TASK 5 – SENTENCE TRANSFORMATIONS

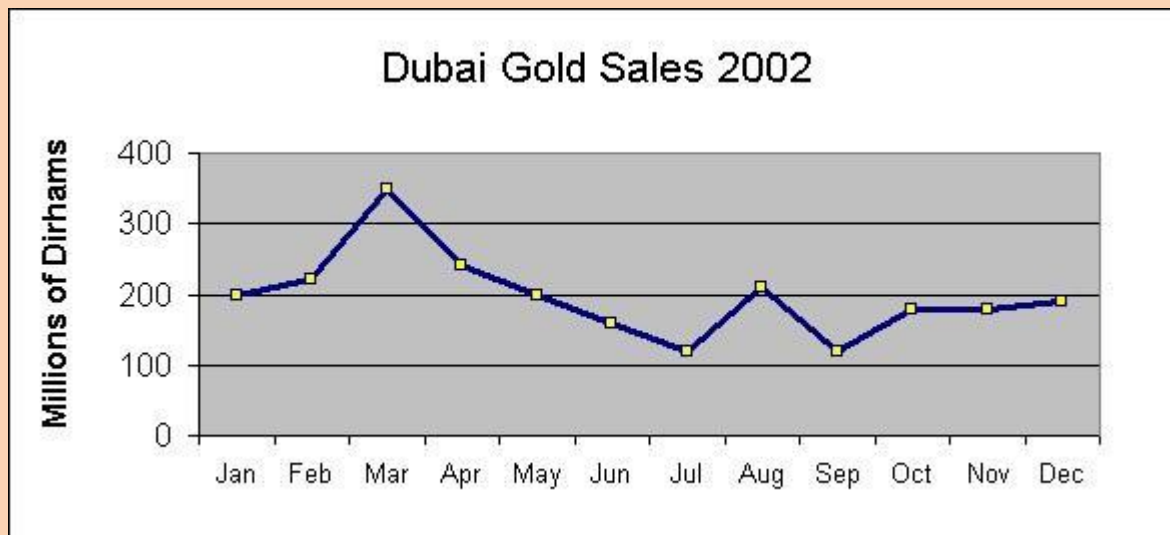
Rewrite the sentences using the word provided in the brackets while trying to keep the same meaning of the sentence. You may not change the form of the word in the brackets.

1. Oil prices rose slightly. (**RISE**)
There was _____ oil prices.
2. Sales peaked at 50,000 euros. (**OF**)
Sales _____ 50,000 euros.
3. The number of car owners increased by 5 million. (**TO**)
There was _____ the number of car owners _____ 3 million to _____.
4. Gas prices soared and then they decreased gradually. (**FOLLOWED**)
There _____ a sharp increase _____ gas prices, _____ decrease.
5. There was a steady growth in the number of employees in three successive quarters. (**GREW**)
The number of employees _____ in three successive quarters.

VOCABULARY TASK 6 – GRAPH DESCRIPTION

Complete the description of the Dubai gold sales graph using the following words.

a low point	declined	doubled	drop	from	increased slightly	recovered	remained
rising sharply	sudden	to	were	of			



In January, gold sales (1) _____ about 200 million dirhams per month. In February they (2) _____ to 220 million dirhams, (3) _____ to a peak (4) _____ 350 million dirhams in March. Over the next four months, sales (5) _____ steadily, reaching (6) _____ of 120 million dirhams in July.

In August, there was a (7) _____ increase. Sales almost (8) _____, rising (9) _____ 120 million dirhams in July to 210 million dirhams in August. This was followed by a (10) _____ in September to 120 million dirhams.

From September to October, sales (11) _____ from 120 million to 180 million dirhams. In October and November, sales (12) _____ steady, and there was a small increase in December (13) _____ 190 million dirhams.

VOCABULARY TASK 7 - CLOZE TEST

Read the text below and write a word that best fits each gap. Use only ONE word in each gap.

The graph shows the development of the number of employees of DART, a car manufacturer, (1) _____ 1982 and 2015. From the company's foundation in 1982, the number of DART's employees increased gradually (2) _____ 2007, when a fire destroyed one of the biggest subsidiaries and the figure slipped to 18,000. Like other companies, DART was (3) _____ by the 2008 financial crisis and (4) _____ a low point of 11,000 employees.

The post-crisis development improved (5) _____ to technical innovations as well as opening of five new subsidiaries. The period was characterized by (6) _____ increase in demand for cars, especially the DATARTEE 3 model, which (7) _____ popular all over Europe and contributed (8) _____ the prosperity of the company. This led to the (9) _____ to hire new staff.

However, the increase (10) _____ down a little in 2012 when a new competitor entered the market. From 2013 to 2015 there was an increase (11) _____ 1,000 employees, (12) _____ is the lowest over the period. (13) _____ 2015, nevertheless, the number has been rising constantly.

Video activity - TED Ed lesson - How to spot a misleading graph

TASK 1 Lead-in

Answer the following questions:

1. How can graphs manipulate viewers/readers?
2. Have you ever noticed a graph which distorts, i.e. manipulates the reality?

TASK 2 Listening

Listen to part of the TED Ed video on how to spot a misleading graph (until 2:47) and match the halves of sentences in the table below

1.	A graph isn't an opinion,	a)	is how graphs usually misinterpret data.
2.	The bar chart published by Chevy	b)	in line graphs.
3.	Manipulating the scale	c)	was made by leaving a major event out of the time range used.
4.	Small differences between things being compared	d)	made Toyota trucks look much less reliable than Chevy trucks.
5.	The x-axis tends to be distorted	e)	involved inconsistent representation of time periods.
6.	The first manipulation of the line graph	f)	their percentage share was the same due to population growth.
7.	The second type of manipulating the line graph	g)	it represents numbers, which are difficult to argue with.
8.	Although the number of viewers in the Super Bowl chart increased,	h)	look much more significant when the y-axis does not start from zero.

Revision time:

Graphs – verbs + nouns – Learning [apps](#).

Graphs – cloze test – Learning [apps](#).

Sources:

1. <https://www.skillsyouneed.com/num/graphs-charts.html>
2. <https://preply.com/en/blog/charts-graphs-and-diagrams-in-the-presentation/>
3. <https://www.woodwardenglish.com/lesson/prepositions-ielts-writing-task-1-graphs/>
4. https://www.youtube.com/watch?v=MtrBQSLDOrU&ab_channel=BestMyTest
5. https://www.youtube.com/watch?v=uAU_qh-WBuQ&ab_channel=E4BFreeEnglishCourse
6. <https://www.woodwardenglish.com/lesson/ielts-writing-task-1-describing-trends-vocabulary-word-order/>
7. <https://www.tutor2u.net/economics/reference/economic-cycles-supply-side-shocks>

DEFINITIONS

DESCRIPTION OF GRAPHS

account for	to be a particular amount or part of something
axis (<i>pl. axes</i>)	a fixed line against which the positions of points are measured, especially points on a graph
bar	a long narrow rectangle
bar chart	a diagram that uses lines or narrow rectangles (= bars) of different heights (but equal widths) to show different amounts, so that they can be compared
compose	to combine together to form a whole
curve	a line or surface that bends gradually
data	facts or information
data series	a row or column of numbers that are entered in a worksheet and plotted in your chart, such as a list of quarterly business profits
decade	a period of ten years, especially a continuous period
degree	the amount or level of something
dependency	the state of relying on somebody/something for something
display	to show information
graph	a diagram consisting of a line or lines, showing how two or more sets of numbers are related to each other
horizontal axis	the x-axis on a graph
label	to write information on something
line graph	a diagram that shows the relationship between the measurements of two things as points that are joined together by lines
majority	the largest part of a group of people or things
minority	the smaller part of a group; less than half of the people or things in a large group
pattern	the regular way in which something happens or is done
pie chart	a diagram consisting of a circle that is divided into sections to show the size of particular amounts in relation to the whole
plot	to make a diagram or chart from some information
presentation	the series of computer slides that are shown with the talk at a meeting
report	written description of something containing information that somebody needs to have
revenue	the money that an organization receives from its business
sales	the number of items sold
securities	financial instruments that represent some type of financial value, usually in the form of a stock, bond, or option
segment	a part of something that is separate from the other parts or can be considered separately
solid line	a line in a graph which is not interrupted
table	a list of facts or numbers arranged in rows and columns
track	to follow the progress or development of something
trend	a general direction in which a situation is changing or developing

vertical axis	the y-axis on a graph; the line of figures or data arranged from top to bottom at the side of the graph
visualise	to make something able to be seen by the eye
visualisation	the act of making something able to be seen by the eye
x-axis	a horizontal number line of a graph
y-axis	a vertical number line of a graph