STATE DA VINCI DECATHLON 2017

CELEBRATING THE ACADEMIC GIFTS OF STUDENTS

IN YEARS 7 & 8.

CARTOGRAPHY

TEAM NUMBER _____

CARTOGRAPHY

The story of the Dutch clerk who stole the Iberian maps.

Jan Huyghen van Linschoten.

Linschoten's map of India.

Linschoten's maps. North is oriented left.

In the 16th century, the Spanish and the Portuguese had the best maps. The Iberian Peninsula controlled the power of all the information needed to send merchant ships to Asia (and, to a large extent, the new world as well). The Iberians had invested heavily in research and development, sending out de Gama, Magellan, Dias, Columbus, all those explorers to map the world. And because they were the only Europeans with reliable maps of the East Indies — these maps were state secrets — the Iberian's had the power and the monopoly.

Once this monopoly was in place, three things happened: the Iberian's became rich; they pillaged their colonies with increasing ferocity; and their innovation stalled completely. When there is a monopoly with this power, there is no incentive to act well, or to improve. Ship-building techniques plateaued, navigation science stagnated, and the evolution of financing stalled.

During that time, Jan Huyghen van Linschoten, was working as a secretary for the Portuguese Archbishop in Goa, India. In that capacity, he travelled all over the world. Somewhere along the way, he got his hands on the Portuguese maps, and he copied them. Then he returned to Holland. It took him a while — but by the time he got home he had written down all the information he'd gleaned (or stole) from the Portuguese.

Then he did something unusual: instead of using the information himself, or selling it to a Dutch merchant house, he published it. This was after the invention of the printing press, but before the invention of copyright, so the maps multiplied freely. The Power was no longer in the hands of the minority, everyone had the power. This publication triggered a cascade of world-changing events.

Linschoten published the maps in 1596. The British East India Company started in 1600; the Dutch east India Company was founded in 1602. The Dutch East India Company also represented an innovation in financing; it as the first joint stock company, and its formation gave rise to trade in options and derivatives. Once the maps were available and the Iberian monopoly was broken, new ideas flowered, and new investment flowed. The Power that the Portuguese and Spanish enjoyed at this stage of the Age of Exploration had disappeared and their fortunes and power of influence went with those precious maps.

Portugal soon suffered the massive earthquake in 1755 which had the power to devastate their capital, brought an end to their chance of being a major sea power in the 18th and 19th centuries.

QUESTION 1 (20 MARKS)

The centre of *power* for any country is its capital city. Name the capitals of the following 20 countries of the world.

	COUNTRY	CAPITAL
1	Belgium	
2	Denmark	
3	Latvia	
4	Ghana	
5	Montenegro	
6	Colombia	
7	Haiti	
8	Iraq	
9	Romania	
10	Nigeria	
11	Oman	
12	Pakistan	
13	Costa Rica	
14	Seychelles	
15	Estonia	
16	Mali	
17	South Sudan	
18	Fiji	
19	Slovenia	
20	Kazakhstan	

QUESTION 2 (4 MARKS)
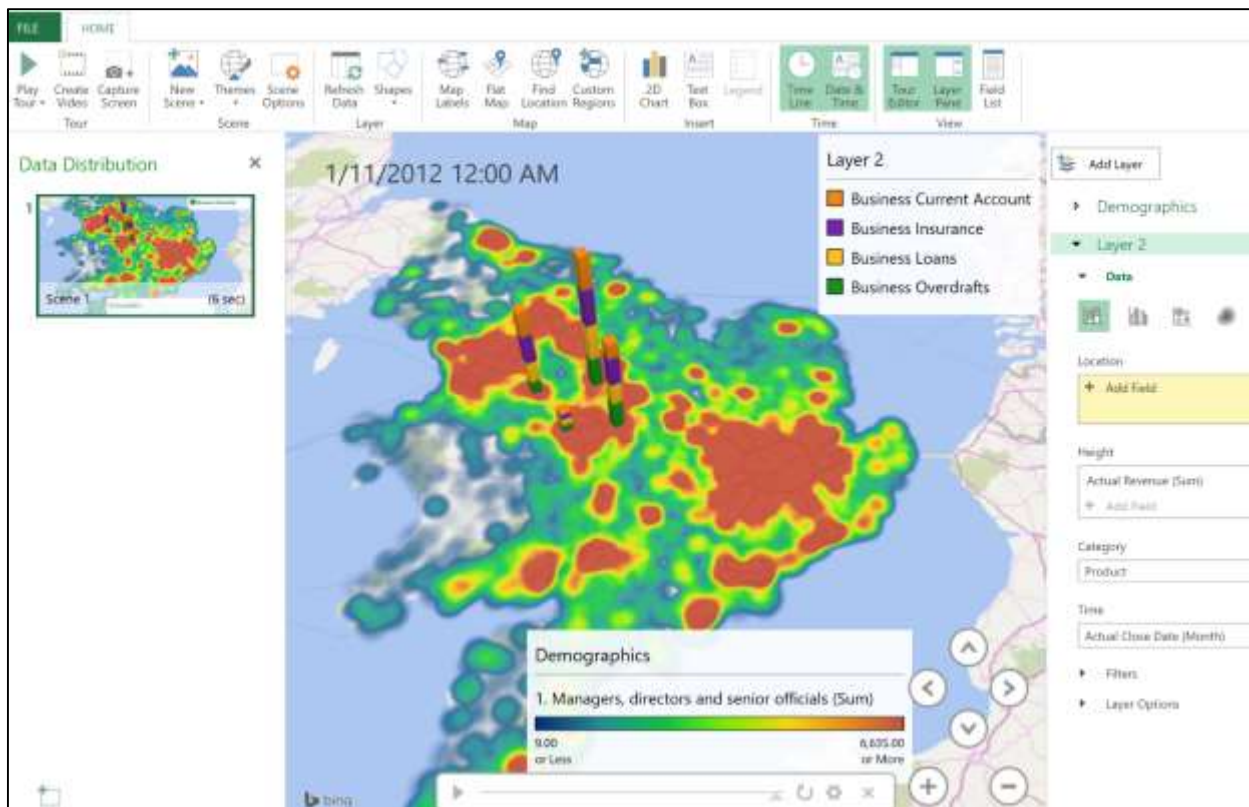
POWER MAPS BY MICROSOFT EXCEL.

Power Map is a 3D data visualization tool for Excel that provides an immersive experience for making discoveries in data that might never be seen in traditional 2D tables and charts. **Power Map,** Microsoft's new Excel add-in used to create 3D geospatial visualizations. It lets you plot geographic and temporal data visually, and analyse that data in 3D. It is able to represent a number of pieces of data, from the Excel Spreadsheet, onto the 3D map. It is a great way to summarise large amounts of data, compare different variables, that may or may not be related, and have these all located on a visual map.

The Spreadsheet must contain a recognisable location, whether it is a post code, district name, state or city name that is recognisable by the programs add-in application. The spread sheet will look something like this;

These snippets from a typical small excel spreadsheet, demonstrate how 2,269 pieces of data are linked to the post code of the district, looking at TWO sets of data regarding types of occupations in the U.K. The resulting image produced will look like this:

Give two advantages to using the 3D geospace visualisation (Power Map) add-on?

1. ………
………
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………
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2. ………
………
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QUESTION 3 (8 MARKS)

SEARCH FOR THE HERETIC PHARAOH'S LOST CAPITAL OF ANCIENT EGYPT

The remains of the capital city built by the Pharaoh Akhenaten of the late Eighteenth Dynasty, and abandoned shortly after his death (1332 BC), were a mystery for centuries. This was due to the fact that he was the heretic Pharaoh who abandoned the traditional God, and declared that Aten was the one and only god to be worshipped. It is represented by the disk of the sun, and in ancient Egyptian mythology was also referred to as the God Ra. The name for the city employed by the ancient Egyptians is written as Akhetaten in English transliteration. Akhetaten means "Horizon of the Aten". It was the capital of Ancient Egypt between 1353 BCE and 1332 BCE, for 21 years the centre of culture and the nation.

Hieroglyphic text below including the cartouches of Pharaoh Akhenaten and Queen Nefertiti.

The first western mention of the city was made in 1714 by Claude Sicard, a French Jesuit priest who was travelling through the Nile Valley, and described the boundary of Akhetaten. As with much of Egypt, it was visited by Napoleon's corps de savants in 1798–1799, who prepared the first detailed map of Akhetaten, which was sadly lost. The only map of the area, which was publish by Sicard, including the only know image of him, did not give any clear mention of the cities location. Here it is;

Sir John Gardner Wilkinson (5 October 1797 – 29 October 1875) was an English traveller, writer and pioneer Egyptologist of the 19th century. He is often referred to as "the Father of British Egyptology".

(These files are from the Wikimedia Commons.)

As subject of the picture, John Gardner Wilkinson, died in 1875, it is fairly safe to say that the author of this photograph has been dead over 100 years & thus the photo is Public Domain. Two sources amongst several found are: http://2terres.hautesavoie.net/wegypte/texte/wilkinso.html and http://www.touregypt.net/featurestories/wilkinson.htm

In 1824 Sir John Gardiner Wilkinson explored and mapped what he thought were the city's remains. Sadly the city was abandoned when Pharaoh passed away, and his son, Tutankhamun (pictured above, seated with his Queen by his side) restored the old religion and returned to Thebes in 1332 BCE. Wilkinson understood that Pharaoh Akhenaten required a place near the sacred Nile River, and that it needed to be where the God Ra, the Sun Disc, could be revered in all its glory. Wilkinson assumed that meant it was away from populated areas and other religious sites. He also wanted to ensure that Ra would be pleased with the site and it needed to align with some important places. Wilkinson understood that what once an important site, may or may not still be important.

YOUR TASK

a. Find the following sites on the modern map of Egypt, label them clearly. Need to be accurate. (4 marks)

The four locations are:

1. Kharga Oasis   Coordinates: 25°26′N 30°33′E
2. Amunia   Coordinates: 31°21′N 27°14′E
3. Dendara (Kaine)   Coordinates: 26°10′N 32°43′E
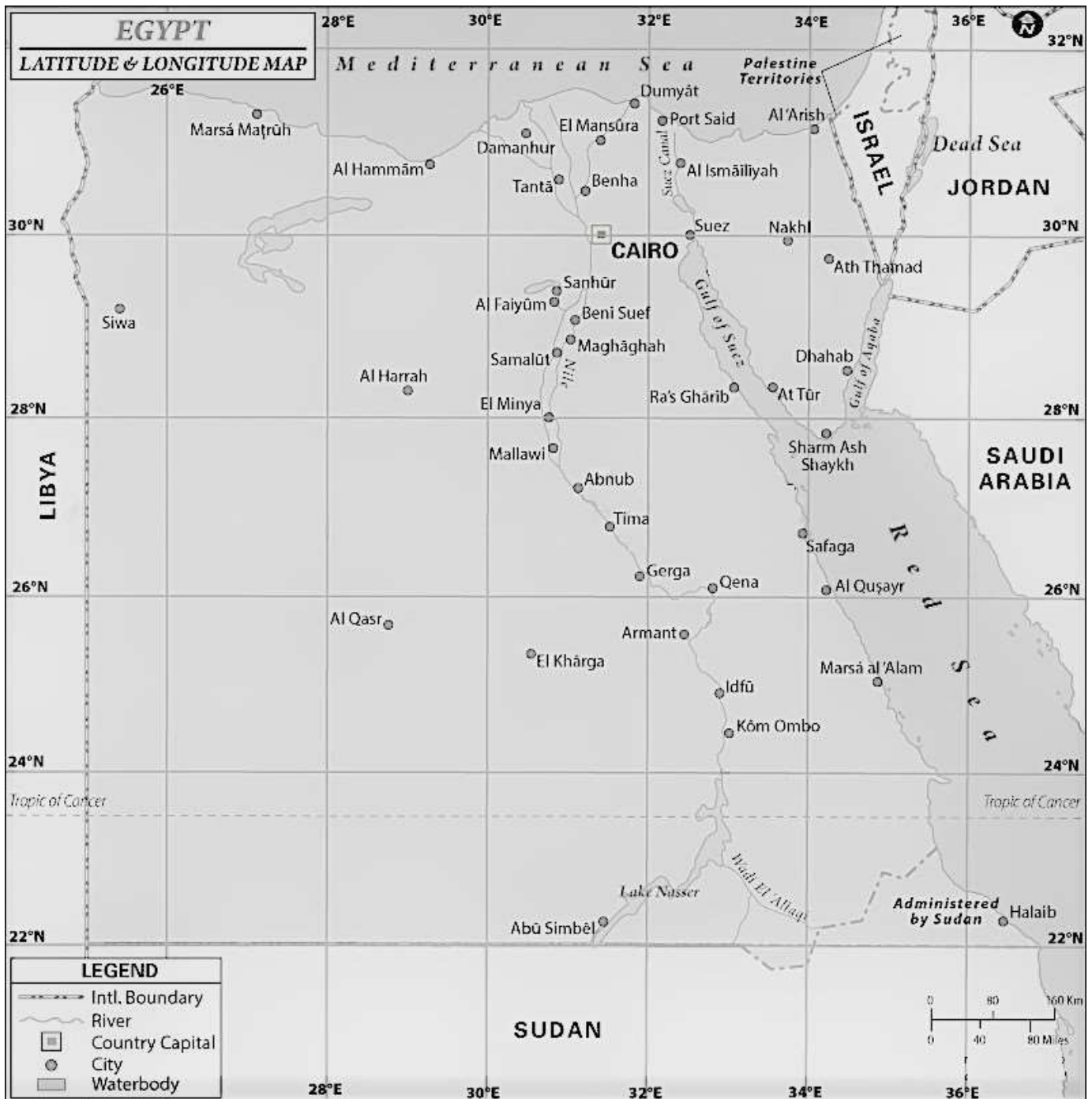4. Tamiat   Coordinates: 31°25′N 31°49′E

b. Rule lines between them and see if there is a point where they intersect. Need to be accurate. (2 marks)

c. Then describe this location's longitude and latitude, within a minute of the coordinate.

d. What are the coordinates of the City of Akhetaten? Need to be accurate.

Coordinates:……………………………………………………………………………… (2 marks)

- Find these sites on the modern map of Egypt, label them clearly. Need to be accurate.
- Rule lines between them and see if there is a point where they intersect. Need to be accurate.

The four locations are:
- Kharga Oasis   Coordinates: 25°26′N 30°33′E
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- Tamiat   Coordinates: 31°25′N 31°49′E

QUESTION 4 (16 MARKS)

RIVERS OF THE WORLD

As shown in the previous question, the Nile River was more than just a river flowing through the centre of the Ancient Egyptian territories, it brought the "Power of Life' to the people – a kingdom that lasted two and a half thousand years. The river brought water, to the desert. It provided transport, when it flooded. It brought nutrient rich silt that ensured that agriculture thrived on the banks of the Nile. The river brought so much power to the people of Ancient Egypt that it had a religious significance. The temples, pyramids and cities were all found on the banks of the river, or, on the rare occasion, at an oasis in the desert.

Some questions relating to this river, and many more.

1. The source of the Nile River is?   _____ (1 mark)

2. The richly laid Nile Delta, and also known as the mouth of the Nile River, flows into which sea?

    _____ (1 mark)

3. The Length of the Nile River is?   _____ (1 mark)

4. The Nile River was the longest river in the world, until an undiscovered tributary was discovered

    for another river, and this river is now the longest river in the world.

    _____ (1 mark)

5. This river, mentioned in question 4, is found on which continent?

    _____ (1 mark)

6. List the longest rivers of these continents:

    North America   _____   (1 mark)

    Asia   _____   (1 mark)

    Europe   _____   (1 mark)

7. Name the rivers that flow through the Capital Cities of Australia.

Australian State and Territories Capital City.	Main River through State Capital City
Canberra	
Sydney	
Melbourne	
Brisbane	
Perth	

Adelaide	
Hobart	
Darwin	

(8 marks)

QUESTION 5 (12 MARKS)

COLONIAL POWER

In the age of discovery, the European Powers sailed around the continent of Africa, seeking the 'spices' that gave them great economic power. Other commodities became valued and trade with exotic countries developed into more permanent 'colonization' of these foreign lands. In this diagram to the right, the map of Africa is represented by the flags of the colonial powers that stacked a claim on the lands of Africa. Only Liberia and Ethiopia managed to remain independent during the 'Partition of Africa' 1881 to 1914.

Your task is to draw to scale another continent of the world, or a country that has also been divided up by other powerful nations, and indicate the historical period that it occurred and reflect with symbolic meaning and significance how you decorate the map.

COLONIAL AFRICA

Name of Country:……………………………………………………..

Historical Time and Location, and the Significance of this Power Struggle (4 marks)

_____

_____

_____

_____

_____

_____

_____

For the map itself, you need to follow these guidelines:

- ☐ Proportions need to be realistic to the continent or country that your team have selected

- ☐ The significance of the map must be genuine (not fictional), in relation to the time period chosen

- ☐ The map does not necessarily have to be topographical or political – be original!

You will be marked based on the following criteria (two marks each – 8 marks)

- ☐ Significance and historical importance

- ☐ Creative and original design (decoration) and use of space, particularly how the divisions are indicated between regions

- ☐ Attention to detail and accuracy of divisions

- ☐ Accuracy of proportion

Draw map in this space. Use it effectively.

END OF PAPER.

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Cartography Answers

TEAM NUMBER _____

CARTOGRAPHY

The story of the Dutch clerk who stole the Iberian maps

Jan Huyghen van Linschoten.   Linschoten's map of India.   Linschoten's maps. North is oriented left.

In the 16th century, the Spanish and the Portuguese had the best maps. The Iberian Peninsula controlled the power of all the information needed to send merchant ships to Asia (and, to a large extent, the new world as well). The Iberians had invested heavily in research and development, sending out de Gama, Magellan, Dias, Columbus, all those explorers to map the world. And because they were the only Europeans with reliable maps of the East Indies — these maps were state secrets — the Iberian's had the power and the monopoly.

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During that time, Jan Huyghen van Linschoten, was working as a secretary for the Portuguese Archbishop in Goa, India. In that capacity, he travelled all over the world. Somewhere along the way, he got his hands on the Portuguese maps, and he copied them. Then he returned to Holland. It took him a while — but by the time he got home he had written down all the information he'd gleaned (or stole) from the Portuguese.

Then he did something unusual: instead of using the information himself, or selling it to a Dutch merchant house, he published it. This was after the invention of the printing press, but before the invention of copyright, so the maps multiplied freely. The Power was no longer in the hands of the minority, everyone had the power. This publication triggered a cascade of world-changing events. Linschoten published the maps in 1596. The British East India Company started in 1600; the Dutch east India Company was founded in 1602. The Dutch East India Company also represented an innovation in financing; it as the first joint stock company, and its formation gave rise to trade in options and derivatives. Once the maps were available and the Iberian monopoly was broken,

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QUESTION 1 (20 MARKS)

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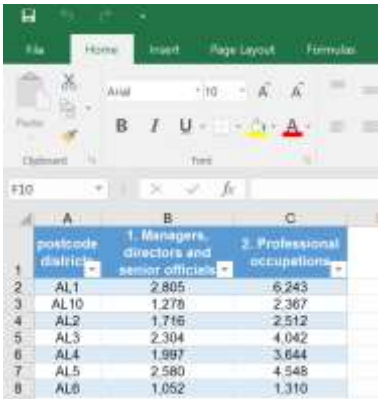
	Country	Capital
1	Belgium	Brussels
2	Denmark	Copenhagen
3	Latvia	Riga
4	Ghana	Accra
5	Montenegro	Podgorica
6	Colombia	Bogotá
7	Haiti	Port-au-Prince
8	Iraq	Baghdad
9	Romania	Bucharest
10	Nigeria	Abuja
11	Oman	Muscat
12	Pakistan	Islamabad
13	Costa Rica	San José
14	Seychelles	Victoria
15	Estonia	Tallinn
16	Mali	Bamako
17	South Sudan	Juba
18	Fiji	Suva
19	Slovenia	Ljubljana
20	Kazakhstan	Astana

QUESTION 2 (4 MARKS)

POWER MAPS BY MICROSOFT EXCEL.

Power Map is a 3D data visualization tool for Excel that provides an immersive experience for making discoveries in data that might never be seen in traditional 2D tables and charts. **Power Map,** Microsoft's new Excel add-in used to create 3D geospatial visualizations. It lets you plot geographic and temporal data visually, and analyse that data in 3D. It is able to represent a number of pieces of data, from the Excel Spreadsheet, onto the 3D map. It is a great way to summarise large amounts of data, compare different variables, that may or may not be related, and have these all located on a visual map.
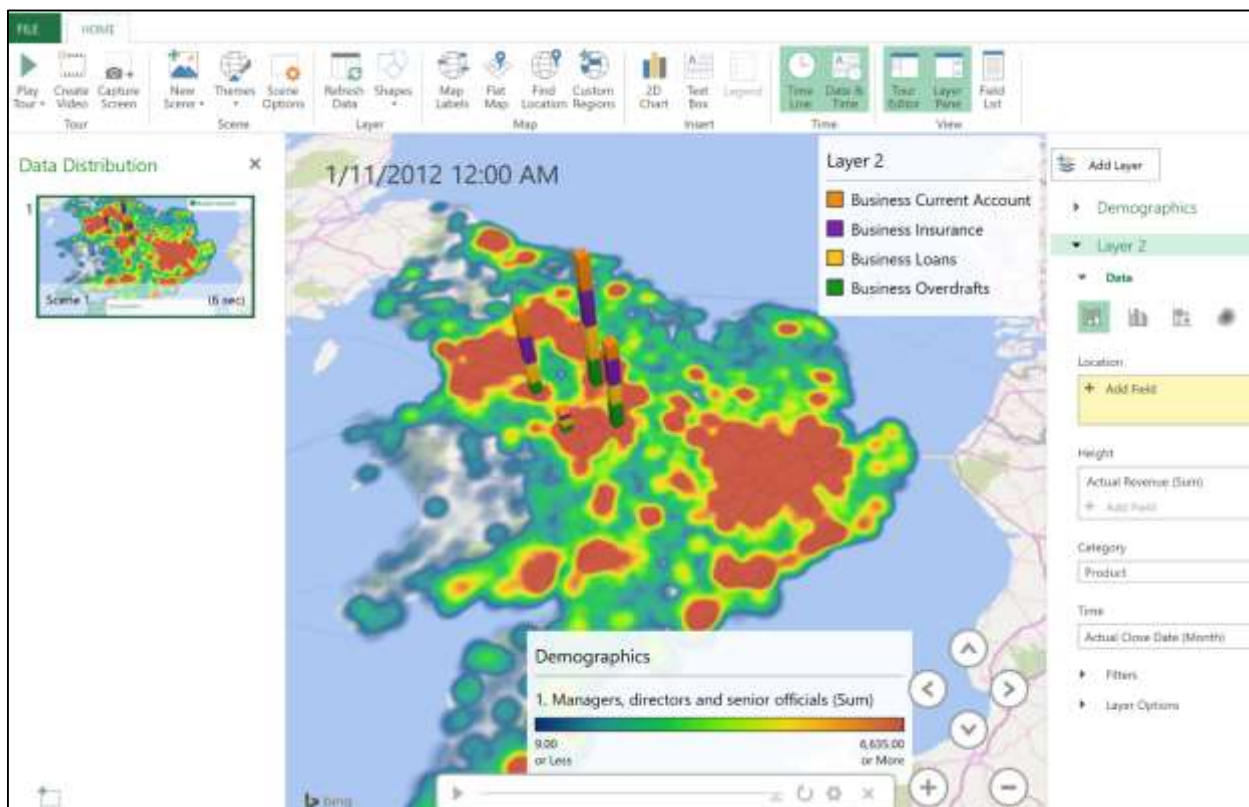
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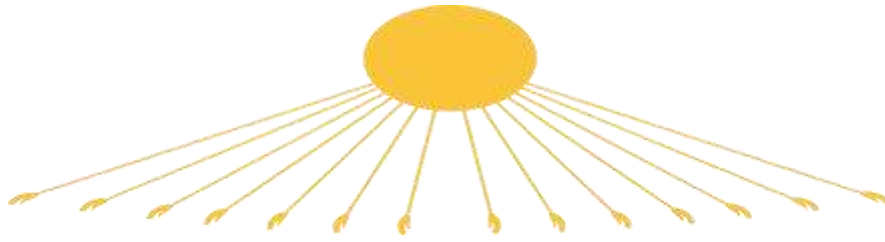Give two advantages to using the 3D geospace visualisation (Power Map) add-on?

1. ……
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2. ……
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Solutions may vary.

One mark for an advantage named and a second mark for example or explaination.

Potentially some solutions may be;

- Visual representation of data, not in a tabular form
- When data has a location element to it, the map reference on a visual map gives context
- Multiple variables can be represented on the one map
- Correlation between variables is visually represented in this formate, and more easily identifiable.
- Any other reasonable example.

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4. Tamiat   Coordinates: 31°25'N 31°49'E

b. Rule lines between them and see if there is a point where they intersect. Need to be accurate. (2 marks)

c. Then describe this location's longitude and latitude, within a minute of the coordinate.

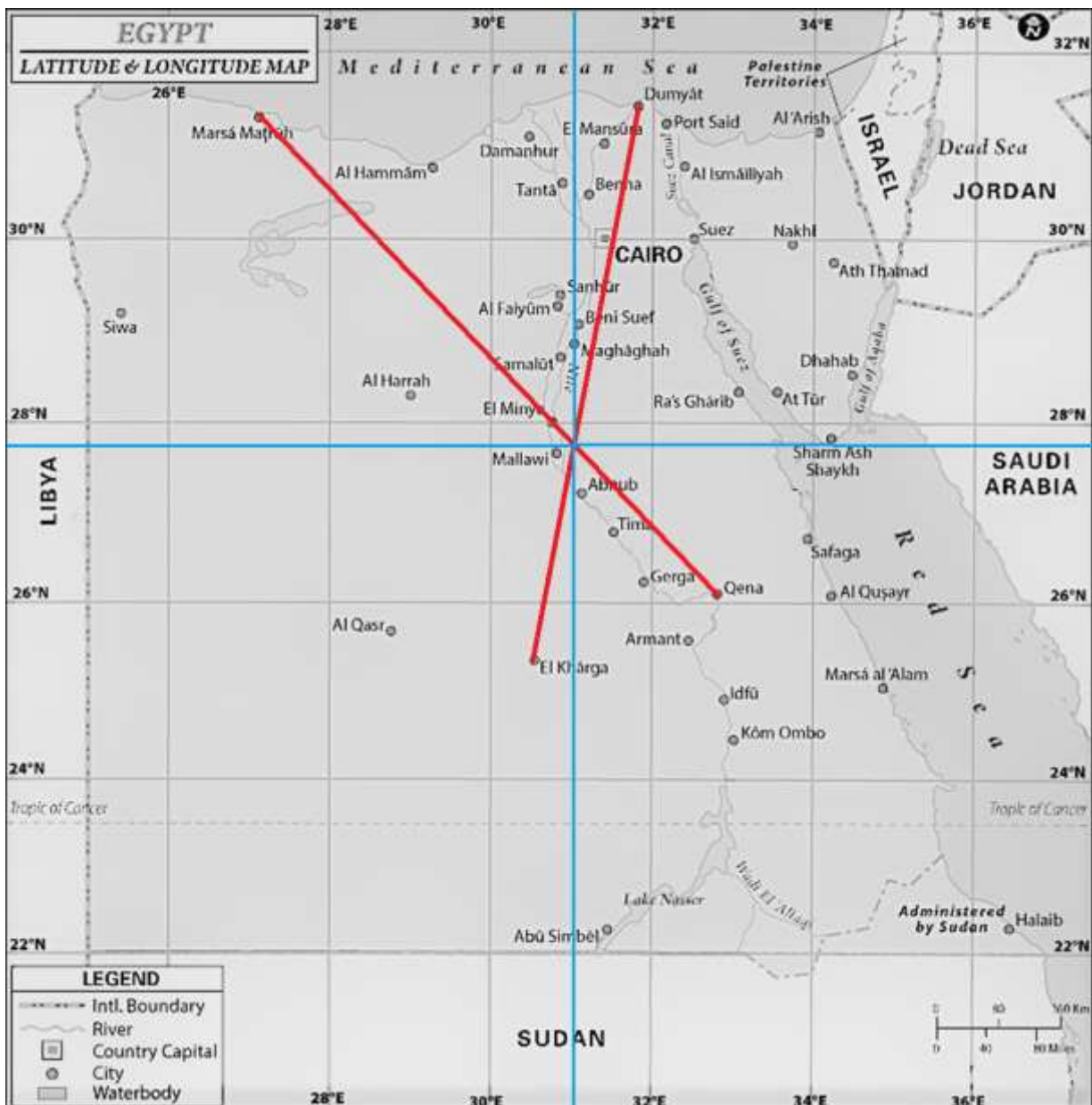d. What are the coordinates of the City of Akhetaten? Need to be accurate.

Coordinates:………………………………31º 02´ E   and   27 º 45´ N……………………… (2 marks)

See below for part mark allocation

7

- Find these sites on the modern map of Egypt, label them clearly. Need to be accurate.

- Rule lines between them and see if there is a point where they intersect. Need to be accurate.

The four locations are:

- Kharga Oasis   Coordinates: 25°26'N 30°33'E   Ancient name for El Kharga   (clearly located 1 mark)

- Amunia   Coordinates: 31°21'N 27°14'E   Ancient name for Marsa Matruh   (clearly located 1 mark)

- Dendara (Kaine) Coordinates: 26°10'N 32°43'E   Ancient names for Qena   (clearly located 1 mark)

- Tamiat   Coordinates: 31°25'N 31°49'E   Ancient name for Dumyat   (clearly located 1 mark)

Coordinates are;   31° 02´ E   and   27 ° 45´ N

Accept;   31° 01´ E   to   31° 03´ E   and   27 ° 43´ N   to   27 ° 48´ N

For half marks accept;   31° 00´ E   to   31° 06´ E   and   27 ° 40´ N   to   27 ° 50´ N

8

QUESTION 4 (16 MARKS)

RIVERS OF THE WORLD

As shown in the previous question, the Nile River was more than just a river flowing through the centre of the Ancient Egyptian territories, it brought the "Power of Life' to the people – a kingdom that lasted two and a half thousand years. The river brought water, to the desert. It provided transport, when it flooded. It brought nutrient rich silt that ensured that agriculture thrived on the banks of the Nile. The river brought so much power to the people of Ancient Egypt that it had a religious significance. The temples, pyramids and cities were all found on the banks of the river, or, on the rare occasion, at an oasis in the desert.

Some questions relating to this river, and many more.

1. The source of the Nile River is?   ____

   Lake Nyanza (Lake Victoria) + accept Kagera River (tributary to Lake Nyanza)__ (1 mark)

2. The richly laid Nile Delta, and also known as the mouth of the Nile River, flows into which

   sea?   __Mediterranean Sea_____   (1 mark)

3. The Length of the Nile River is?   the Nile a length of 6,758 km (4,199 mi) (±50km)   (1 mark)

4. The Nile River was the longest river in the world, until an undiscovered tributary was

   discovered for another river, and this river is now the longest river in the world. What is its

   name?   _____ Amazon River_____ (1 mark)

5. This river, mentioned in question 4, is found on which continent?

   _____South America_____ (1 mark)

6. List the longest rivers of these continents:

   North America   ____ Mississippi River_____ (1 mark)

   Asia   ____ Yangtze River _____   (1 mark)

   Europe   _____ Volga River _____ (1 mark)

7. Name the rivers that flow through the Capital Cities of Australia.

Australian State and Territories Capital City.	Main River through State Capital City
Canberra	Molonglo River
Sydney	Parramatta River
Melbourne	Yarra River
Brisbane	Brisbane River
Perth	Swan River
Adelaide	River Torrens
Hobart	Derwent River
Darwin	Darwin River

(8 marks)

QUESTION 5 (12 MARKS)

COLONIAL POWER

In the age of discovery, the European Powers sailed around the continent of Africa, seeking the 'spices' that gave them great economic power. Other commodities became valued and trade with exotic countries developed into more permanent 'colonization' of these foreign lands. In this diagram to the right, the map of Africa is represented by the flags of the colonial powers that stacked a claim on the lands of Africa. Only Liberia and Ethiopia managed to remain independent during the 'Partition of Africa' 1881 to 1914.

Your task is to draw to scale another continent of the world, or a country that has also been divided up by other powerful nations, and indicate the historical period that it occurred and reflect with symbolic meaning and significance how you decorate the map.

Historical Time and Location, and the Significance of this Power Struggle:

_____

_Make reference to a time in history   (1 mark) _____

_Make reference to a place, continent or country (1 mark) _____

_Describe the significance of the division of the country or continent by a foreign power (1 mark)

_Explain the symbolic decoration to represent the sections of the landmass (1 mark)

_____

_____

_____

(4 marks)

For the map itself, needs to follow these guidelines:

☐ Proportions need to be realistic to the continent or country that your team have selected

☐ The significance of the map must be genuine (not fictional), in relation to the time period chosen

☐ The map does not necessarily have to be topographical or political – be original!

You will be marked based on the following criteria (two marks each):

☐ Significance and historically important

☐ Creative and original design (decoration) and use of space, particularly how the divisions are indicated between regions

☐ Attention to detail and accuracy of divisions
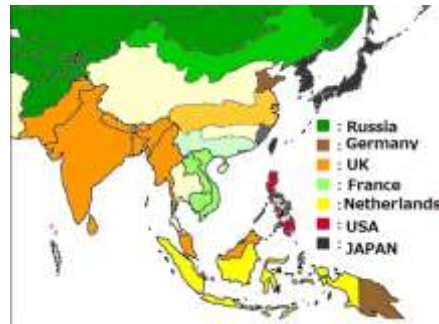
☐ Accuracy of proportion

(8 marks)

Draw map in this space. Use it effectively.

You will be marked based on the following criteria (two marks each):

- ❖ **Significance and historically important**
- ❖ **Creative and original design (decoration) and use of space, particularly how the divisions are indicated between regions**
- ❖ **Attention to detail and accuracy of divisions**
- ❖ **Accuracy of proportion**

Please award half marks where appropriate

Some maps showing colonization by colonial powers are;

END OF PAPER.

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