

Transition work – Geography

Using Figure 1 and 2 examine the following questions;

A) To what extent is there a relationship between the largest and deadliest earthquakes?

B) Outline the reasons why the largest earthquakes are not always the most deadly.

- You should aim to write one side of A4 covering both questions (300-500 words).
- You should use case studies to evidence your answer. You will need to research some of these case studies in more depth to write a detailed answer.

Figure 1 – Largest earthquakes 2005 - 2014

Year	Magnitude	Fatalities	Region
2005	8.6	1313	Northern Sumatra, Indonesia
2006	8.3	0	Kuril Islands
2007	8.5	25	Southern Sumatra, Indonesia
2008	7.9	87587	Eastern Sichuan, China
2009	8.1	192	Samoa Islands region
2010	8.8	507	Offshore Maule, Chile
2011	9.0	20896	Near the East Coast of Honshu, Japan
2012	8.6	0	off the west coast of northern Sumatra
2013	8.3	0	Sea of Okhotsk
2014	8.2	6	NW of Iquique, Chile

Figure 2 – deadliest earthquakes 2005-2014

Year	Magnitude	Fatalities	Region
2005	7.6	80361	Pakistan
2006	6.3	5749	Java, Indonesia
2007	8.0	514	Near the Coast of Central Peru
2008	7.9	87587	Eastern Sichuan, China
2009	7.5	1117	Southern Sumatra, Indonesia
2010	7.0	316000	Haiti
2011	9.0	20896	Near the East Coast of Honshu, Japan
2012	6.7	113	Negros-Cebu region, Philippines
2013	7.7	825	61km NNE of Awaran, Pakistan
2014	6.2	729	near Wenping, China

Consider; population density / level of development / distance from the epicentre / depth of focus / time of day / time of year / communication and accessibility / secondary factors.

Q1	<p>Rhona and Freya are planning their gap-year trip to the USA. They have looked up the maximum and minimum temperatures of three towns they are hoping to visit in order to work out what to pack.</p> <p>Calculate the annual temperature range for each town.</p> <p>Trumpton: Max. 37°C / Min. 8°C Obamaville: Max 29°C / Min -13°C Bushanopolis: Max 39°C / Min 24°C</p>
<p>Your workings:</p>	

Q2	<p>Floodingham has a river running through it that sees a lot of variation in flow. The new monitoring station records river level changes in mm, but for comparison with older recordings they need to be converted into metres.</p> <p>Calculate how much the river level changed in metres each month. Which month showed most variation, and which the least?</p> <p>July: High 2300 mm. Low 1246 mm. September: High 3454 mm. Low 1320 mm. November: High 3657 mm. Low 3144 mm.</p>
<p>Your workings:</p>	

Q3	<p>Kenya has just released some population data from its recent census. Of its total population of 47,673,499 it estimates that 42% are between the ages of 0-14.</p> <p>Calculate how many children aged 0-14 live in Kenya to the nearest whole number.</p>
<p>Your workings:</p>	

Q4	<p>Seathwaite, in the Lake District, is one of the wettest places in England. It recorded these rainfall totals on consecutive days recently.</p> <table border="1" style="margin: 10px auto; width: 80%;"> <tr> <td>mm.</td> <td>56</td> <td>93</td> <td>148</td> <td>137</td> <td>84</td> <td>25</td> <td>12</td> <td>212</td> <td>76</td> </tr> </table> <p>Calculate the total rainfall, the mean daily rainfall, and the median figure.</p>	mm.	56	93	148	137	84	25	12	212	76
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<p><i>Your workings:</i></p>											

Q5	<p>In Oman, oil revenues generate \$143,640,000,000 of wealth. The country has a total annual GDP (wealth) of \$171 billion.</p> <p>Calculate the percentage contribution of oil revenue to total annual wealth.</p>
<p><i>Your workings:</i></p>	

Q6	<p>California has one of the largest water footprints in the USA. $\frac{4}{8}$ its water needs go to environmental uses, $\frac{2}{5}$ to agriculture and $\frac{2}{20}$ to industry.</p> <p>Calculate the percentage of water that goes to each of these 3 uses.</p>
<p><i>Your workings:</i></p>	

Q7	<p>A plane is flying from Manchester to Reykjavik at an average speed of 320 mph. The distance is 1040 miles. But the data needs to be consistent with European metric data bases. 1 mile is approximately 1.6 km.</p> <p>Calculate the distance in km. and the average speed in kph. Assuming the plane leaves Manchester at 13.30 hrs, and Iceland is 1 hr behind Manchester time, what time will the plane land at Reykjavik local time.</p>
<p>Your workings:</p>	

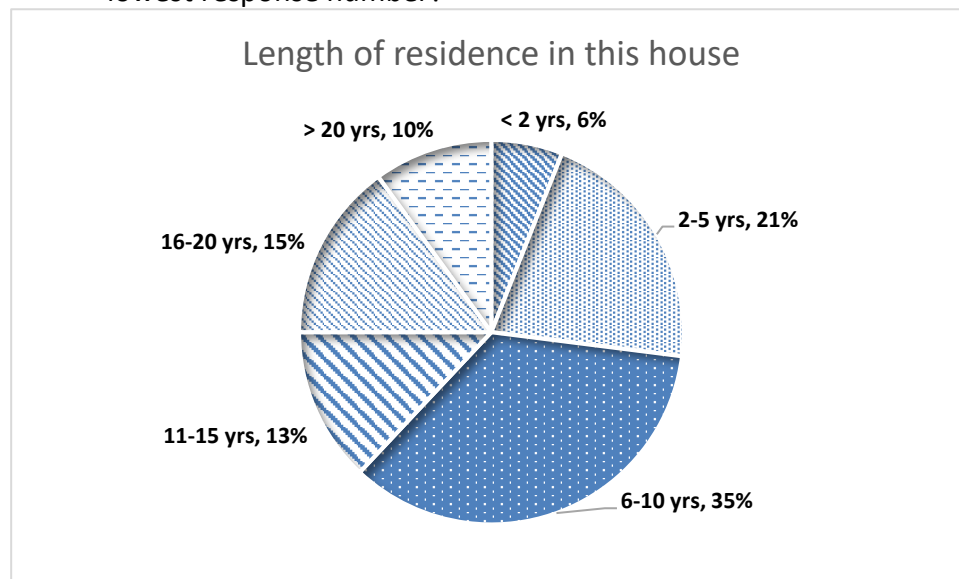
Q8	<p>A melting Norwegian glacier is 2.352 km long. In the last 10 years, it has retreated 147 metres.</p> <p>Calculate the percentage loss of the glacier length over that time to one decimal point. Estimate how many years it will take for the glacier to fully disappear assuming consistent melting rates.</p>
<p>Your workings:</p>	

Q9	<p>In 2016 car manufacturing in Slovakia produced 1,038,503 cars. In 2010, Slovakia produced 880,721 cars.</p> <p>Calculate the percentage increase in car production over the six years.</p>
<p>Your workings:</p>	

Q10	<p>To enter beach material results into a database following a quadrat survey of a stretch of coastline, it was necessary to convert the estimated percentages of coverage by each material type into decimal values.</p> <p>What percentage (%) did these material types cover in the quadrat? The remainder was obscured by seaweed. What percentage and decimal value was that?</p> <p>Sand: 0.25 Shingle: 0.08 Pebbles: 0.44 Rocks: 0.16</p>
<p><i>Your workings:</i></p> 	

Q11	<p>The changing birth rates for a selection of countries is being studied. What patterns/trends are observable, and where do you see anomalies that would justify further investigation?</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th><i>Country</i></th> <th><i>BR 1990</i></th> <th><i>BR2017</i></th> <th></th> <th><i>Country</i></th> <th><i>BR 1990</i></th> <th><i>BR 2017</i></th> </tr> </thead> <tbody> <tr> <td>Somalia</td> <td>44.3</td> <td>39.6</td> <td></td> <td>China</td> <td>10.5</td> <td>12.3</td> </tr> <tr> <td>Norway</td> <td>13.5</td> <td>12.2</td> <td></td> <td>Uganda</td> <td>48.8</td> <td>42.9</td> </tr> <tr> <td>Senegal</td> <td>39.9</td> <td>36.3</td> <td></td> <td>Iceland</td> <td>13.9</td> <td>13.7</td> </tr> <tr> <td>Japan</td> <td>7.9</td> <td>7.7</td> <td></td> <td>Denmark</td> <td>10.8</td> <td>10.5</td> </tr> <tr> <td>Angola</td> <td>45.3</td> <td>44.8</td> <td></td> <td>Italy</td> <td>8.9</td> <td>8.6</td> </tr> </tbody> </table>	<i>Country</i>	<i>BR 1990</i>	<i>BR2017</i>		<i>Country</i>	<i>BR 1990</i>	<i>BR 2017</i>	Somalia	44.3	39.6		China	10.5	12.3	Norway	13.5	12.2		Uganda	48.8	42.9	Senegal	39.9	36.3		Iceland	13.9	13.7	Japan	7.9	7.7		Denmark	10.8	10.5	Angola	45.3	44.8		Italy	8.9	8.6
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- Q12** As part of a Changing Place study, a total of 90 residents were surveyed asking how long they had lived in their current house. The results were rounded up to whole per cent.
- Calculate the number of people who responded in each category. (Possibly not a whole number as the percentages have been rounded).
 - Approximately how many times greater is the largest response category compared with the smallest?
 - Why might you have anticipated the smallest category to have the lowest response number?



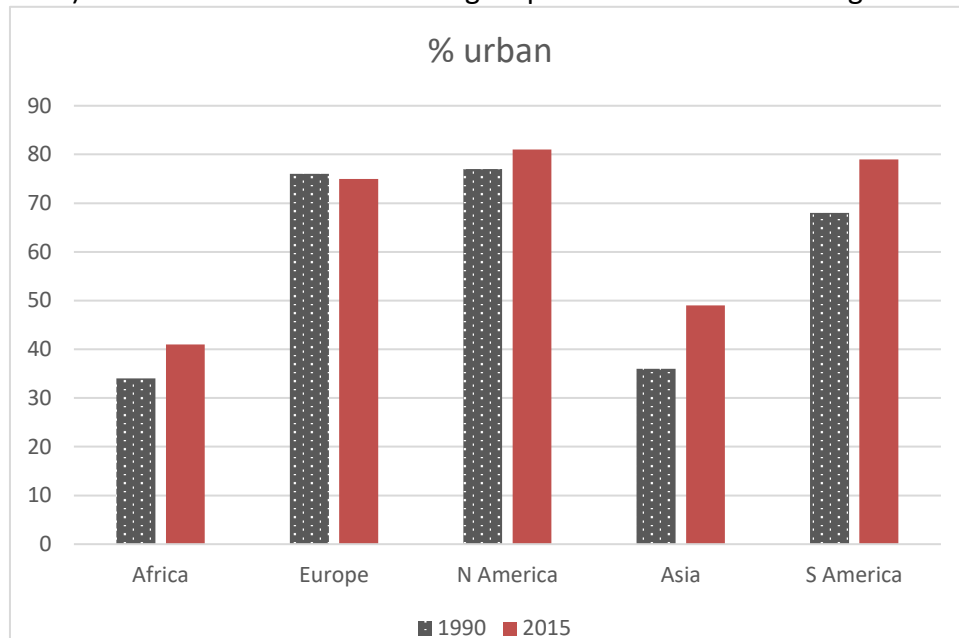
Your workings:

- Q13** Ben and Oki fly out from London, Ben westwards to Los Angeles at longitude $118^{\circ} 55'$ and Oki eastwards to $146^{\circ} 23'$ in Japan.
- How far, in degrees of longitude, are they apart?

Your workings:

Q14 The chart shows the changing percentage of people living in urban areas between 1990 and 2015.

- Which continent has shown the largest proportional change?
- Which continent is an anomaly?
- Which continent has the largest potential for future change?



Your workings:

Q15 See if you can work through a standard formula 'blind'. Apply the values provided below to the formula to calculate the value of r_s (to 2 dec. places)

$$r_s = 1 - \frac{6 (\sum d^2)}{n^3 - n}$$

Where $\sum d^2$ is 13.8
 And n is 11

Your workings: