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91429



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Level 3 Geography, 2017

91429 Demonstrate understanding of a given environment(s) through selection and application of geographic concepts and skills

2.00 p.m. Wednesday 22 November 2017

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of a given environment(s) through selection and application of geographic concepts and skills.	Demonstrate in-depth understanding of a given environment(s) through selection and application of geographic concepts and skills.	Demonstrate comprehensive understanding of a given environment(s) through selection and application of geographic concepts and skills.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

Pull out Resource Booklet 91429R from the centre of this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–11 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

Excellence

TOTAL

23

ASSESSOR'S USE ONLY

INSTRUCTIONS

Read **Resource Booklet 91429R** and the questions in this booklet before you begin your written answers.

Select and apply a range of resources and geographic skills to comprehensively analyse the various geographic concepts, as they apply to the Blue Spring at Putaruru, and to the theme of bottled water.

Definitions of the relevant geographic concepts are provided on page 2 of the resource booklet.

QUESTION ONE: THE LOCATION AND ACCESSIBILITY OF THE BLUE SPRING

Refer to **Resources A–F** on pages 3–7 of the resource booklet, when answering this question.

Location: The position of something that can be given in absolute terms, or in relation to other objects. Location can be an advantage, or a constraint.

Accessibility: A measure of the ease of movement of people or ideas. The greater the accessibility, the greater the potential for change.

- (a) Describe, in detail, the location and accessibility of the Blue Spring.

Use geographic skills such as distance, direction, latitude and longitude, grid references, and relief interpretation, as well as specific information from the resources, to support your answer.

Blue Spring is located ^{just} ~~in the~~ north of the centre of New Zealand's North Island. It is located ^{approximately 50km} south east of Hamilton, ~~central~~ a major city in the North Island, ^{and is} ~~also~~ within the ^{southern part of the} Waikato region.

Blue Springs is in the southern and Eastern hemispheres, located ^{in the southern part of Australasia/Oceania} approximately at $38^{\circ}0'0''$ south and $175^{\circ}30'0''$ East. The spring itself is

part of the Waihou River. The closest town is Putaruru, which is approximately 12km south west of the spring.

Blue Spring is accessible via car and foot, although it is not very accessible for large numbers of vehicles. If

travelling from local cities, Blue Spring is accessible by

personal vehicle. For example, if travelling from Hamilton,

State highway 1 can be taken ^{south east,} towards Putaruru and

then onto State highway 28 - also known as Whites Road.

There is parking available on Whites Road, however, it is limited.

and also requires a 1.5 hour walk to get to the actual spring, which may not be a possibility for some people, making it less accessible. Alternatively, Leslie Road can be taken to reduce walking time, however, this road cannot handle large numbers of vehicles due to it being a less used road, it also has very limited parking, making the spring not very accessible for large crowds of tourists. ~~Extra Park~~ see

Perspectives may include, but are not limited to economic, social, political, indigenous, environmental.

- (b) Comprehensively analyse TWO different perspectives about the significance of the Blue Spring.

Use specific information from the resources to support your answer.

Blue Spring is of significance to multiple different groups of people, for different reasons. This is an example of the geographic concept of perspective. One perspective is from Maori culture, i.e. from the perspective of an indigenous perspective of the spring. ~~To~~ the Maori people, Blue Spring, or Te Puna, is of cultural and historic significance.

The first use of the Waihou River - which Blue Spring is part of - was by some of the first Maori to visit the region, one of whom was King Te Whero Whero Tawhiao. Him and his people relied heavily on the river. It was used for faster transportation through ~~the~~ land covered in dense natural bush and as part of a travelling route to nearby regions in the North Island. The river also provided resources, such as food from fishing and flax that grew along the banks. Overall the River was an integral part of every day life, thus of significance to the Maori people at the time. Nowadays, in Maori culture, the River is just as significant. The fact that the river was occupied by the second Maori King is of major cultural importance. ~~As well as the fact~~ Combined with the natural beauty of Blue Spring, ~~the~~ Te Puna was considered a natural

Part (b) continues on the next page

Taonga - i.e. a natural treasure, that must be protected. This shows that blue spring is of major importance and significance due to its rich history, ~~and~~ culture and natural beauty, from the perspective of the Maori people. Another perspective, is from the local people in terms of the local economy. Blue spring is of economic significance to people that live here. The reason for its natural beauty is the fact that the water is naturally filtered. Water spends 100 years filtering through aquifers along the spring. Not only does this make the water very clear, but also removes any harmful impurities - making the water very safe to drink. For this reason, in the 1980's, Coca-Cola applied for a resource consent to bottle and take advantage of this natural water purifying system. As a result of the resource consents acceptance, they set up a bottling plant in the local township. ~~the~~ As a result, this bottling plant had a positive economic effect on the local economy. It provided the small town with 70 jobs - all of which were taken by locals. ^{providing a reliable and steady income} The fact that the blue spring provides 70% of New Zealand's bottled water indicates its success. Some of the profit made by exporting the bottled water directly impacts the local people, as it is money they would otherwise never see. Additionally, the Waikato District Council is trying to promote the area to tourists. If a steady tourism industry were to be set up, this would be another source of income to local businesses, again benefiting the local economy. Overall, from an economic perspective, the Blue Spring is of major significance to the local people, due to the positive economic impact and opportunities it has created for the town.

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The examination continues on the following page.**

QUESTION TWO: BOTTLED WATER CONSUMPTION

Refer to **Resource G** on page 8 of the resource booklet, when answering (a).

- (a) List in order the three countries with the **most** per capita consumption of bottled water in 2015.

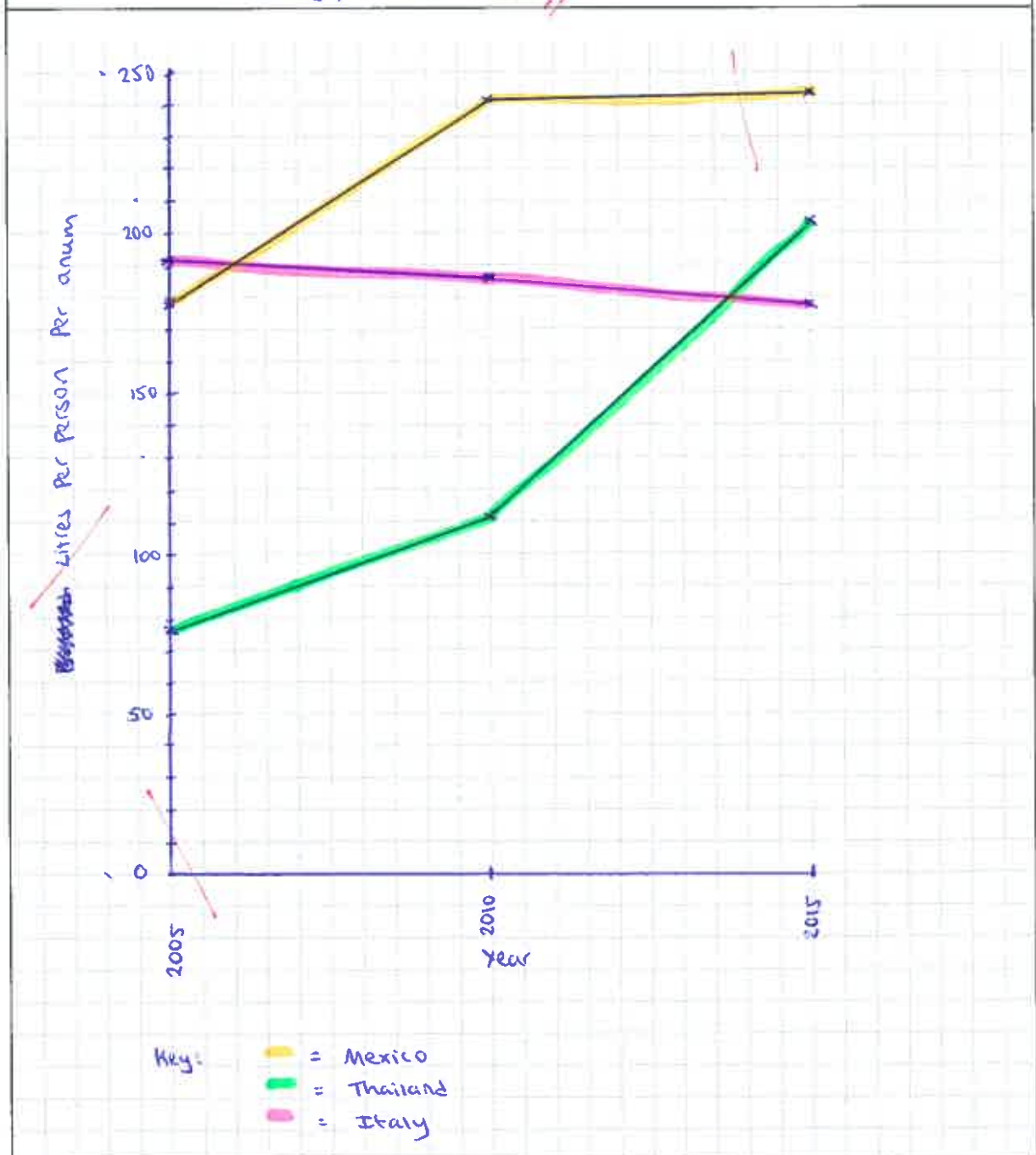
Rank (1) Mexico

Rank (2) Thailand

Rank (3) Italy

Draw a suitable graph below to compare how per capita consumption of bottled water has changed in these in three countries since 2005. Include all appropriate graphing conventions.

Title: Bottled water consumption per capita in Mexico, Thailand and Italy, 2005 - 2015



Refer to **Resources G–K** on pages 8–10 of the resource booklet, when answering (b).

- (b) Provide comprehensive reasons for the change in global bottled water consumption up to the present time, and why it is predicted to change in the future.

Use specific information from your graph on page 6, and **Resources G–K**, to support your answer.

The two main reasons for the ^{change and} increase in bottled water consumption globally, is the availability of clean water and health implications. In most of Asia and parts of South America - such as Mexico, clean water is hard to source. Factors that cause this is the lack of infrastructure i.e. ~~not~~ clean tap water in poorer third world countries, such as parts of Mexico, and contaminated water in countries prone to flooding, such as in Thailand. Because of these factors, bottled water may be the only source of clean drinking water in these places, thus the consumption of bottled water is increasingly high. For example, Thailand has shown ^a significant increase in the amount of bottle water consumed per capita in the last 10 years: increasing from only 77 litres per person per annum in 2005 to 111 in 2010 and 204 in 2015. This increase could be due to water contamination during earthquakes, tsunamis and flooding during this time, but also due to the lack of infrastructure. Similarly in Mexico, the amount of bottle water consumed continues to rise, starting at 179 litres/person/annum in 2005 to 247 in 2010. This would be due to the lack of clean drinking water via tap. In the near future, in countries such as these, bottled water consumption will continue to increase. This is an example of the geographic concept of change. As populations continue to increase in poorer nations, and there still isn't ^{easily} enough accessible clean drinking water, people will be forced to turn to bottled water. This issue will only continue to grow worse, thus bottled water consumption will continue to change and increase globally, as third world countries in Asia and parts of South America are ~~the largest economies of bottled water~~ some of the largest ^{Extra paper}

E8

QUESTION THREE: SUSTAINABILITY

Refer to **Resources A–K** on pages 2–10 of the resource booklet, when answering this question.

Critically evaluate the future sustainability of the Blue Spring.

Use specific information from the relevant geographic concepts (on page 2 of the resource booklet), and the rest of the resources to support your answer.

currently, from an environmental perspective, tourism at Blue Spring is not sustainable for future continued use. The fact that there are more tourists visiting the springs than expected (8999 in a single month) and the fact that there is not sufficient infrastructure to handle this number of visitors is having negative effects on the natural environment - which will only continue to get worse in the future if no action is taken place. The lack of toilets (only one to cater 400 people visiting at one time) and the fact that people are littering is polluting the natural environment. As a result, vegetation in the riverbed is harmed and water quality is decreasing. If this continued to occur, the spring would lose its natural beauty and the water may not be safe to swim in. In a worse case scenario, in the future, tourists may no longer be inclined to visit, as the natural environment would be destroyed.

~~Therefore~~ At the rate it is going, the Blue Spring is not sustainable as a tourist attraction due to the negative ~~and~~ effects it has on the natural environment. Additionally, the lack of infrastructure at Blue Spring, ~~additionally~~ also makes tourism less sustainable. The fact that there is only enough parking for 17 people at one of the carparks and the fact that the access road cannot handle heavy traffic and has minimal signage, ~~does~~ has negative effects on the local community. People are forced to park along the sides of the roads, potentially blocking residents access to their homes. Traffic congestion and reckless driving is also at an increased possibility, due to the rural

type access road. Overall this indicates that Blue Spring does not have the infrastructure to host large numbers of tourists, which will only continue to get worse if nothing is done to solve the issue. As a whole, tourism is not sustainable at Blue Spring currently, due to the lack of infrastructure and the negative environmental effects it is causing.

In terms of economic sustainability, Blue Spring will be a sustainable form of income for the locals due to the water bottling plant. ~~At this rate, the global~~ Currently, global bottled water consumption is at an all time high, and is expected to continue to increase in the near future.

Considering Blue Spring supplies 70% of New Zealand's bottled water currently, it has the possibility ^{and opportunity} of expanding to international markets to maximise its profits, ~~which~~ ^{is} ~~the~~ ~~increasing~~ ~~global~~ ~~consumption~~ ~~of~~ ~~bottled~~ ~~water~~. With the risk of damage to the natural environment from tourism, the water bottling industry is at risk. If water quality is compromised before it reaches the bottling plant, it wouldn't be safe to see and consume the water from Blue Spring. As a result, the bottling plant would have to shut down, which would be a huge economic loss to the local economy. - meaning the water bottling industry would no longer be a sustainable practice at Blue Spring. Overall from an economic perspective, Blue Spring is sustainable due to the success of ~~the~~ the bottled water industry - which has the opportunity to become even more successful in the near future. However, there is also the risk of the whole industry becoming unsustainable at Blue Spring if pollution from tourism continues to get out of hand. As of now, at the rate things are going, ^{+ extra paper}

E8

see

Extra space if required.

Write the question number(s) if applicable.

QUESTION
NUMBER

Question 1. a. : continued

and steep surrounding relief

Due to the dense natural bush, accessing the spring ~~from~~ ¹⁰⁰ feet from the carparks is limited to foot from the carparks.

There are no roads that lead directly to it and there are limited tracks. Steep hills must also be traversed, ^{or avoided} ¹ one as high as 160m in elevation. This limits the spring's accessibility to some people. Also, even though there are two airstrips in close proximity to the spring, it is not very accessible to tourists from outside of this region of the North Island. Since there is no shuttle service, tourists must have their own form of transportation - i.e. cannot fly into it to visit. Thus limiting its accessibility to some tourists.

* Question 2. b. continued:

influences of bottled water consumption globally. The other main driving factor of increased bottled water consumption is health, this factor is heavily prevalent in the U.S. water consumption is

starting to overtake ~~water~~ ^{fizzy} consumption, due to people becoming more health aware. As fizzy consumption continues to decline,

water consumption will only increase. Although the U.S. has clean tap water in most places, ^{and bottled water is more expensive than tap water} people gravitate

towards bottled water due to its convenience and marketing.

Companies will continue supplying bottled water if people continue buying/consuming, as it is a profitable industry ^{worth \$70 billion in 2014} on the

global scale, considering Asia/Mexico and the U.S. are the biggest consumers of bottled water ^(China + U.S. alone account for 30% of global consumption), and that both

Asia/Mexico and the U.S. are expected to consume

Extra space if required.

Write the question number(s) if applicable.

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QUESTION
NUMBER

(u.s. + China expected to reach 35% of global consumption in 2019)
increasingly more bottled water in the future, the overall
global consumption of ~~more~~ bottled water increases also.
Even though ~~for~~ countries such as Italy that produce
/manufacture bottled water - yet have clean water, are
decreasing in the amount of bottled water consumed
(141 litres/person/annum in 2005 to 173 in 2015), this does not
outweigh the increasing amount consumed in Asia/Mexico and the
u.s. Thus overall, there is a change and increase in the
global consumption of bottled water.

* Question 3: continued:

I do not believe that Blue Springs will be able to sustain
tourism and even water bottling in the near future. I believe
that serious work must be done to improve the infrastructure
for tourism in order to make it sustainable and to reduce
the risk of closing the water bottling plant. If better access
roads, more parking, better walkways, more toilets and rubbish
bins were made/installed, the sustainability of the attraction
would be improved. There would be less pollution with more
toilets and rubbish bins, meaning the spring will remain
pristine for future tourists. Also the water would be at
less of a risk of being contaminated, meaning the water
bottling plant wouldn't be at risk of closing down and
it continue to benefit the local economy - with opportunity
to expand in the near future. Better roads and more car parking
would make ~~to~~ Blue Spring more accessible to tourists. This
would increase the number of tourists that would

P.T.O

visit, as well as the capacity of tourists that could visit at one time. With more tourists comes the opportunity to establish a wider tourism industry, for example cafes and restaurants. This would have an even greater economic benefit and effect on the local economy, as there would be more people willing to spend money. A well set up attraction with good infrastructure, such as Blue Spring, will attract more people, having a spring board effect on other businesses and activities in the tourism sector.

As a whole, with simple changes and improvements to the infrastructure of Blue Spring, I believe that it will be sustainable for future continued use. The natural environment would not be at risk, more people could visit at once, ~~the~~ tourism could expand as an industry, the water bottling industry would not be at risk and could expand even further having greater economic effects. Thus, Blue Spring has the opportunity to become sustainable if action is taken place, however, at this ^{current} rate it does not appear to be a sustainable.

Subject:		Geography	Standard:		91429	Total score:		23
Q	Grade score	Annotation						
1	E7	<p>The candidate uses multiple skills with precision to determine the location of the Blue Springs. Not all are with precision, but there is distance, direction, latitude and longitude, and topo map reading skills- contour lines, spot heights. Accessibility is considered in detail, and not just how to access the Springs. Two perspectives are correctly identified and explained with some insight.</p>						
2	E8	<p>All aspects of the graph are correct. There is clear and detailed understanding of the reasons for change- lack of access to clean water, issues with infrastructure. Tsunami is specifically mentioned in relation to Thailand and although this is not a defining factor for getting E as it is from outside the resources, shows good geographic knowledge. Linking population growth in poorer countries that struggle to access clean water as being a contributing factor to increased use of bottled water is another aspect that shows insight.</p> <p>This candidate has made the connection between the factors given such as marketing, health and convenience rather than seeing them as separate factors. They have integrated the statistics into their response as evidence to reinforce their ideas.</p>						
3	E8	<p>This candidate has critically evaluated the future sustainability by considering economic and environmental sustainability and has further evaluated the future by considering the impacts that tourism might have on each aspect if it is encouraged and successfully expanded. The concluding paragraph shows in depth understanding and has clear insight.</p>						