

Week 27

AP Human Geography

Homework bundle for this week

本周作业合集

exercises.lol

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7. Industrial and Economic Development Patterns and Processes Starter Quiz · 课前小测

AP Human Geography

Name: _____ Score: _____

1. A port or rail hub where cargo changes from one transport mode to another is a...

- ☐ break-of-bulk point
- ☐ greenbelt
- ☐ primate city
- ☐ food desert

2. A software researcher works mainly in the _____ sector.

- ☐ primary
- ☐ secondary
- ☐ tertiary
- ☐ quaternary

3. Which measure combines income, education, and health into one score?

- ☐ GDP per capita
- ☐ HDI
- ☐ Gini coefficient
- ☐ break-of-bulk

4. Small loans, often given to women to start businesses, are called...

- ☐ microfinance
- ☐ remittances
- ☐ GDP
- ☐ outsourcing

5. Which theory divides the world into core, periphery, and semi-periphery?

- ☐ Rostow's stages
- ☐ Wallerstein's world-systems theory
- ☐ central place theory
- ☐ bid-rent theory

6. The Industrial Revolution spread wealth evenly across all world regions.

- ☐ True
- ☐ False

7. A less-developed economy usually has most workers in the primary sector.
- ☐ True ☐ False
8. A high GDP per capita guarantees that wealth is shared equally.
- ☐ True ☐ False
9. Rising female education and employment tend to lower fertility.
- ☐ True ☐ False
10. Wallerstein's theory argues the global system keeps the periphery poor.
- ☐ True ☐ False

7. Industrial and Economic Development Patterns and ProcessesAnswers

· 答案

AP Human Geography

1. **break-of-bulk point**

A **break-of-bulk point** is a key industrial location.

2. **quaternary**

Information and research jobs are **quaternary**.

3. **HDI**

The **HDI** combines income, education, and health (0-1).

4. **microfinance**

Microfinance provides small loans to fight poverty.

5. **Wallerstein's world-systems theory**

Wallerstein's world-systems theory uses core/periphery/semi-periphery.

6. **False**

It spread wealth **unevenly** — early industrialisers pulled far ahead.

7. **True**

Poorer economies lean on farming and extraction (primary).

8. **False**

GDP per capita is an **average** and can hide huge inequality.

9. **True**

Educated, working women marry later and have fewer children.

10. **True**

It is a **dependency** view: the core stays rich by exploiting the periphery.

7.1 The Industrial Revolution

Name: _____ Class: _____ Date: _____

Total: 10 marks

KEY WORDS industrial revolution 工业革命

Objective

Build the skills to answer exam questions on the **Industrial Revolution** 工业革命.

You must be able to:

- describe what the Industrial Revolution changed
- explain the role of energy and machinery
- explain how it diffused from its hearth
- state one social consequence

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ What changed

The **Industrial Revolution** shifted production from hand tools and homes to machines and factories, hugely raising output.

■ Energy and diffusion

New energy (coal, steam) powered factories. Industry began in Britain and **diffused** to Europe, North America, and beyond via technology and investment.

■ Consequences

It drove **urbanization** as workers moved to factory cities, raised living standards over time, but also created harsh early working and living conditions.

2 Practice

2.1 State two changes the Industrial Revolution brought to production. [2]

2.2 Explain how the Industrial Revolution diffused from its hearth. [2]

2.3 Factory cities grew rapidly during industrialization.

(a) Name the process of people moving to these cities. [1]

(b) State one negative early social consequence. [1]

3 Exam-style questions

3.1 The Industrial Revolution mainly shifted production toward [1]

- **A** subsistence farming
- **B** machines and factories
- **C** shifting cultivation
- **D** handicrafts at home

3.2 The Industrial Revolution's hearth is generally identified as [1]

- **A** North America
- **B** Britain
- **C** Mesoamerica
- **D** the Fertile Crescent

3.3 Industrialization spread from Britain to other regions.

(a) State one thing that diffused to enable it. [1]

(b) Explain one long-term benefit of industrialization. [1]

Solutions

2.1 shift from hand tools to machines; from home/workshop to factories, raising output.

2.2 it began in Britain; technology, capital, and skilled workers spread it to Europe and North America.

2.3 (a) urbanization. (b) overcrowding, pollution, poor housing, or harsh working conditions.

3.1 B. it moved production to machines and factories.

3.2 B. industry began in Britain and diffused outward.

3.3 (a) machinery/technology, capital, or skilled labour. (b) higher output, incomes, and living standards over time.

7.2 Economic Sectors and Patterns

Name: _____ Class: _____ Date: _____

Total: 11 marks

KEY WORDS development 发展 • quaternary 第四产业 • primary 第一产业 • secondary 第二产业
• tertiary 第三产业

Objective

Build the skills to answer exam questions on **economic sectors** 经济部门.

You must be able to:

- define the **primary** 第一产业, **secondary** 第二产业, **tertiary** 第三产业, **quaternary** 第四产业, and **quinary** 第五产业 sectors
- give an example job in each
- explain how the sector mix changes with development
- classify a given job

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ The five sectors

Primary: extracting raw materials (farming, mining). **Secondary:** manufacturing (factories). **Tertiary:** services (retail, transport). **Quaternary:** information/research. **Quinary:** top decision-making (executives).

■ Sectors and development

As a country develops, employment shifts from **primary** to **secondary**, then to **tertiary** and **quaternary** work.

■ Classifying jobs

Ask what the worker does: extract (primary), make (secondary), serve (tertiary), handle information (quaternary), or lead top decisions (quinary).

2 Practice

2.1 Define the secondary sector and give one example job. [2]

2.2 Explain how the sector mix changes as a country develops. [2]

2.3 Classify each job by sector.

(a) A farmer. [1]

(b) A software researcher. [1]

(c) A shop cashier. [1]

3 Exam-style questions

3.1 A worker in a car factory is employed in the [1]

- A primary sector
- B secondary sector
- C tertiary sector
- D quinary sector

3.2 As countries develop, the share of workers in the primary sector usually [1]

- A rises
- B falls
- C stays fixed
- D reaches 100%

3.3 A country's economy is dominated by information technology and research firms.

(a) Which sector dominates? [1]

(b) What does this suggest about its development level?

[1]

Solutions

2.1 manufacturing/processing raw materials into goods; e.g. a factory/assembly worker.

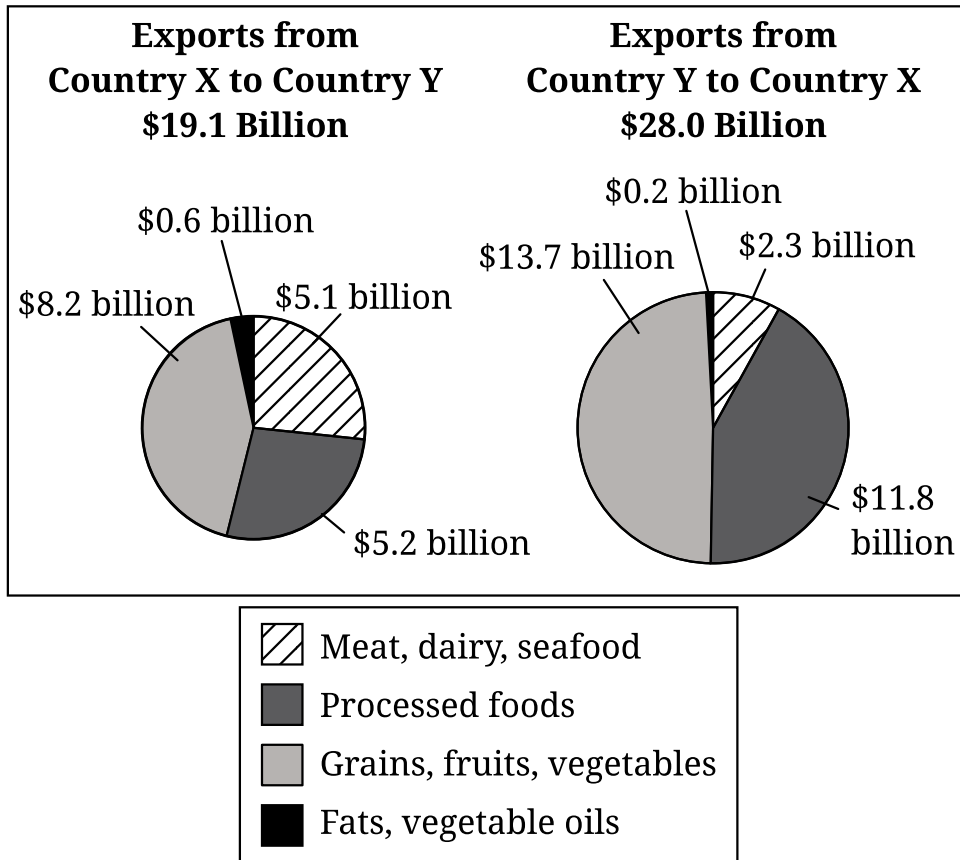
2.2 employment shifts from primary to secondary and then to tertiary/quaternary services.

2.3 (a) primary. (b) quaternary. (c) tertiary.

3.1 B. manufacturing a car = secondary sector.

3.2 B. primary employment falls with development.

3.3 (a) the quaternary sector. (b) it is highly developed.

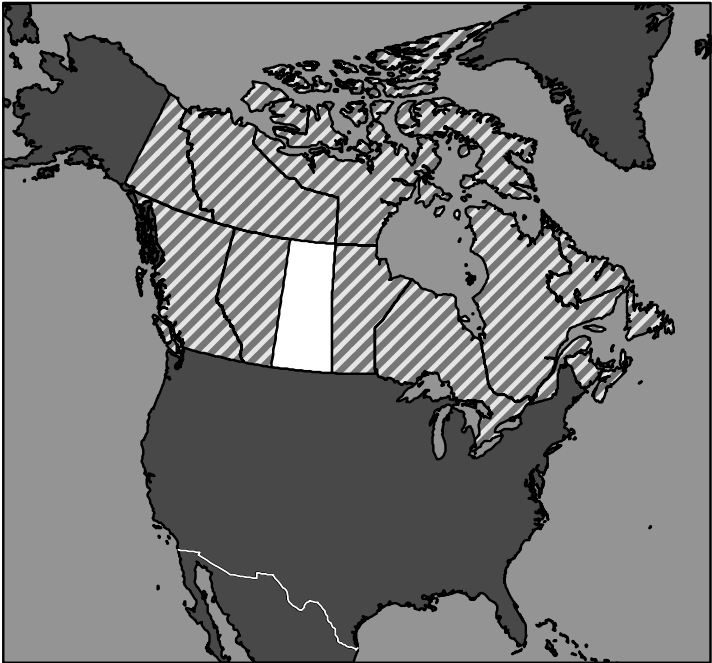
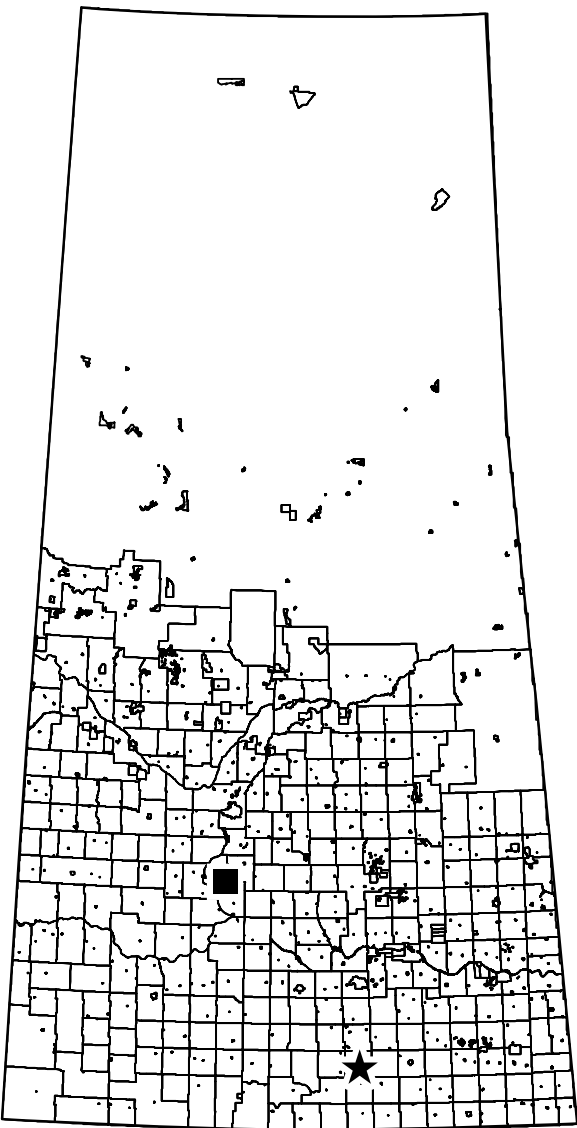
Food Exports Between Country X and Country Y

2. Country X and Country Y have a long-established trade relationship in agricultural products. Country X is a developed country, and Country Y is a developing country.

Respond to parts A, B, C, D, E, F, and G.

- Using the data in the charts, identify the largest food export category between the two countries.
- Using the data in the charts, describe the difference between the two countries in the meat, dairy, and seafood category.
- Define the concept of comparative advantage.
- Describe one effect of Green Revolution technologies on food supplies in developing countries.
- Explain how advances in agricultural technology may increase the carrying capacity of land.
- Explain the degree to which the economies of Country X and Country Y are interdependent. (Response must indicate the degree [low, moderate, high] and provide an explanation.)
- Explain how the charts provide limited information about economic development.

Map 1: Political Divisions in Saskatchewan, Canada



- Saskatchewan
- Other Canadian provinces and territories
- Other countries

0 100 miles

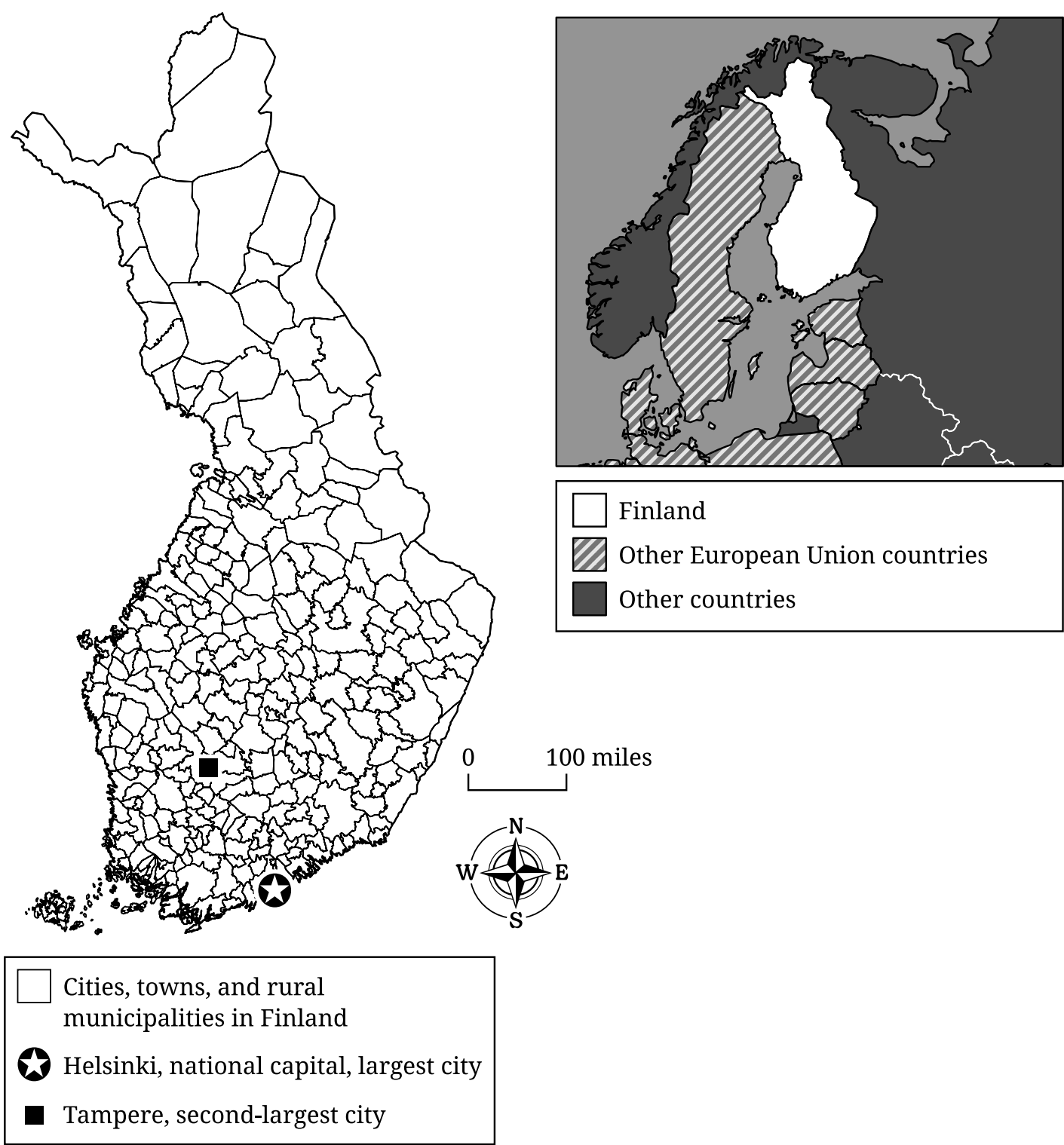


- Cities, towns, and rural municipalities in Saskatchewan
- ★

 Regina, provincial capital, second-largest city
- Saskatoon, largest city

Source: Statistics Canada

Map 2: Political Divisions in Finland



Source: ESRI Data Partners

HUMAN GEOGRAPHY**SECTION II****Time—1 hour and 15 minutes****3 Questions**

Directions: You have 1 hour and 15 minutes to answer all three of the following questions. It is recommended that you spend approximately one-third of your time (25 minutes) on each question. It is suggested that you take up to 5 minutes of this time to plan and outline each answer. You may plan your answers in this orange booklet, but no credit will be given for anything written in this booklet. **You will only earn credit for what you write in the separate Free Response booklet.**

Question 1

1. The availability of food in the context of a growing world population is influenced by many social, environmental, and economic factors.
 - A. Define the concept of carrying capacity.
 - B. Describe ONE way that humans have altered the environmental sustainability of agricultural lands.
 - C. Explain how transportation technology has increased economies of scale in the agricultural sector of less developed countries.
 - D. Explain a likely negative economic outcome of Green Revolution agricultural practices on rural communities.
 - E. Explain ONE weakness of Malthusian theory in predicting the relationship between food production and population growth in contemporary society.
 - F. Explain how surplus food production has changed the global market for local agricultural products.
 - G. Explain the degree to which Green Revolution agricultural practices were effective in reducing hunger in less developed countries. (Response must indicate the degree [low, moderate, high] and provide an explanation.)

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

**SELECTED TECHNOLOGY RESEARCH AND DEVELOPMENT AREAS
IN THE MEDICAL FIELD**

Category	Product or Service
Biotechnology:	• Genetic engineering research • Biochemistry research • Diagnostic and testing science
Gene therapies:	• Cancer treatments • Neurological treatments • Rare and genetic disease treatments • Antiviral treatments and vaccines (e.g., Moderna)

3. Since the 1980s, the northeastern United States has developed into a major global center of high-technology industry that specializes in the medical field.
- Describe the spatial pattern of the companies and institutions shown in the inset map.
 - Describe the concept of a growth pole.
 - Explain ONE way education infrastructure affects a region's potential for high-technology development.
 - Explain how the pattern shown on the map resembles the galactic city model.
 - Explain ONE way local economic changes may be a result of deindustrialization.
 - Explain how the products and services listed in the table demonstrate that this economy has moved into the quaternary sector.
 - The map focuses on a regional scale. Explain a possible limitation of drawing country scale conclusions from a regional scale map.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

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END OF EXAM

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7.3 Measures of Development

Name: _____ Class: _____ Date: _____

Total: 10 marks

KEY WORDS human development index 人类发展指数 • formal 正规经济 • gdp per capita 人均国内生产总值
• informal economy 非正规经济 • gni 国民总收入

Objective

Build the skills to answer exam questions on **measures of development** 发展指标.

You must be able to:

- define **GDP per capita** 人均国内生产总值 and **GNI** 国民总收入
- explain the **Human Development Index** 人类发展指数 (HDI)
- explain the **Gender Inequality Index** 性别不平等指数 (GII)
- distinguish the **formal** 正规经济 from the **informal economy** 非正规经济

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Economic measures

GDP per capita is a country's output divided by its population — a rough measure of average wealth. **GNI** adds income from abroad.

■ Composite measures

The **HDI** combines income, education, and life expectancy into one score (0-1), giving a fuller picture than money alone. The **GII** measures gender inequality.

■ Formal vs informal

The **formal economy** is taxed and recorded; the **informal economy** (street vendors, unregistered work) is not, so official figures can understate real activity.

2 Practice

2.1 Explain why the HDI is a better development measure than GDP per capita alone.[2]

2.2 State the difference between the formal and informal economy. [2]

2.3 Country X has a high GDP per capita but low life expectancy and schooling.

(a) State what its HDI would likely show compared with GDP. [1]

(b) Explain why the two measures differ. [1]

3 Exam-style questions

3.1 The Human Development Index combines income, education, and [1]

- **A** life expectancy
 - **B** the sex ratio
 - **C** population density
 - **D** trade volume
-

3.2 A street vendor who pays no tax and is not officially recorded works in the [1]

- **A** formal economy
 - **B** informal economy
 - **C** quaternary sector only
 - **D** primary sector only
-

3.3 Two countries have equal GDP per capita but very different HDI scores.

(a) State what causes the HDI gap. [1]

(b) Explain why HDI gives a fuller picture. [1]

Solutions

2.1 GDP shows only average income; HDI also includes education and life expectancy, giving a fuller picture of wellbeing.

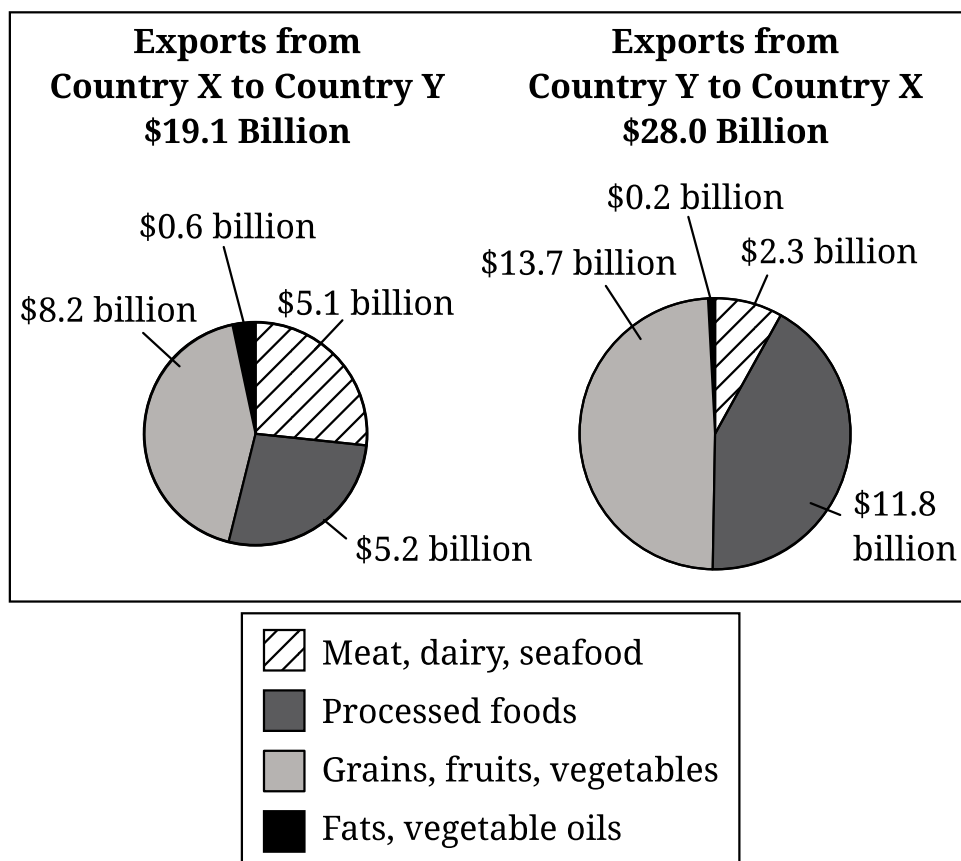
2.2 formal = recorded and taxed work; informal = unregistered, untaxed work (e.g. street vending).

2.3 (a) a lower HDI than its GDP alone suggests. (b) HDI also counts poor health and education, not just income.

3.1 A. HDI = income + education + life expectancy.

3.2 B. unregistered, untaxed work = informal economy.

3.3 (a) differences in education and/or life expectancy. (b) it measures wellbeing (health, education), not just money.

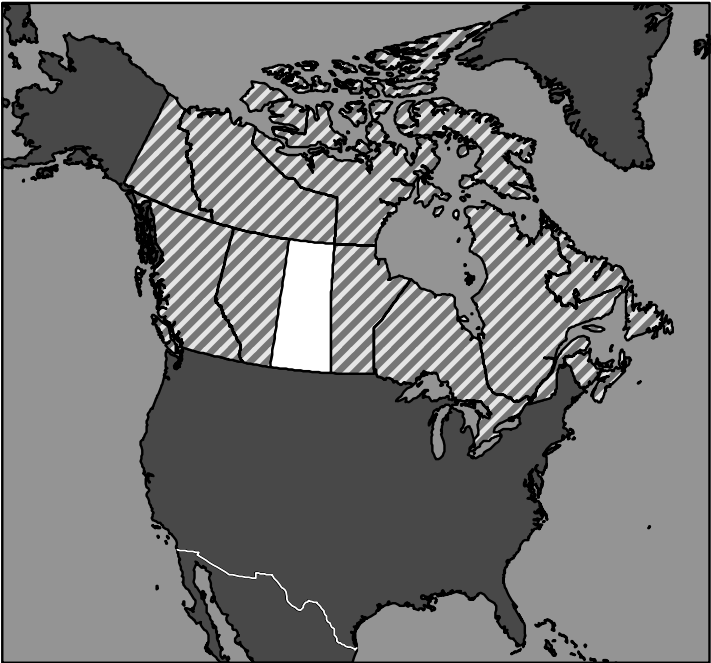
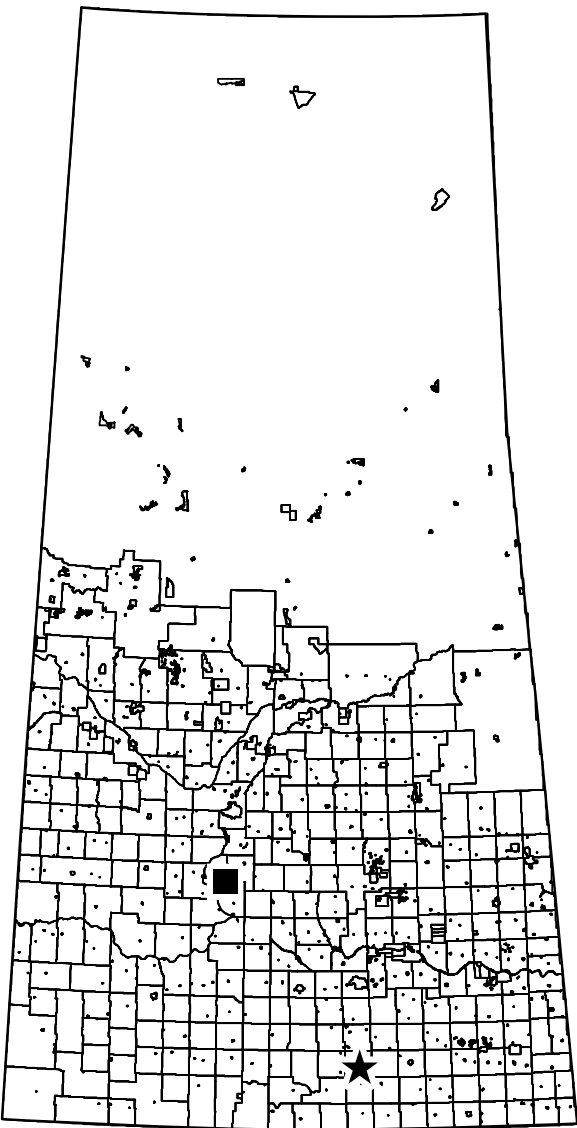
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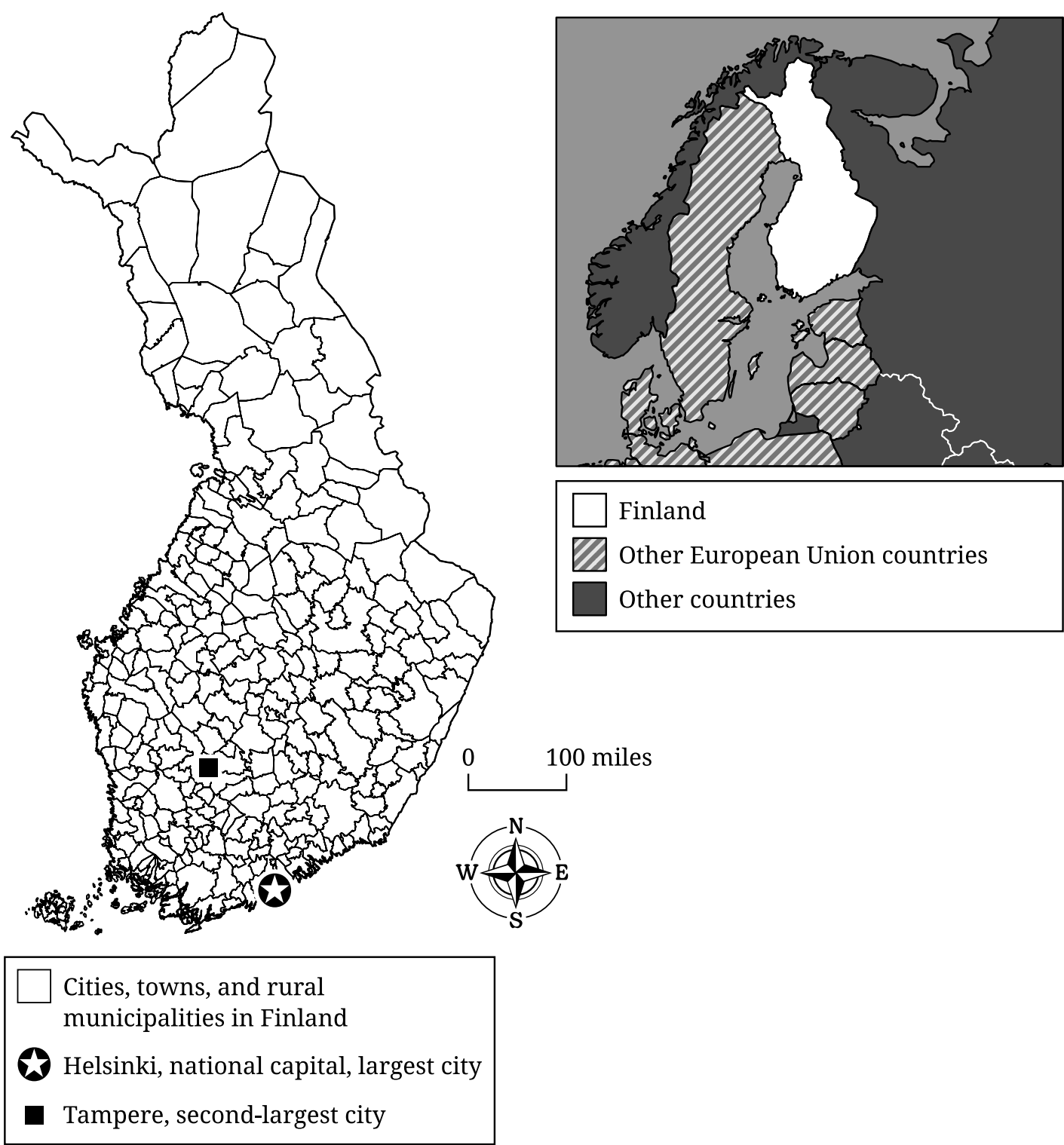


- Cities, towns, and rural municipalities in Saskatchewan
- ★

 Regina, provincial capital, second-largest city
- Saskatoon, largest city

Source: Statistics Canada

Map 2: Political Divisions in Finland



Source: ESRI Data Partners

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IN THE MEDICAL FIELD**

Category	Product or Service
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Question 2**DEVELOPMENT INDICATORS FOR SELECTED COUNTRIES, 2020**

Country	Gross National Income per Capita	Percent of Workforce in Agriculture	Total Fertility Rate	Mean Years of Schooling Women/Men	Life Expectancy	Air Pollution Mortality Rate (per 100,000 people)	Percent of Population with Access to Clean-Burning Fuels
Afghanistan	\$1,976	39%	4.5	1.9 / 6.0	61	211	32%
Brazil	\$10,857	9%	1.7	8.0 / 7.7	69	30	96%
Finland	\$46,343	3%	1.6	12.6 / 12.3	81	7	100%

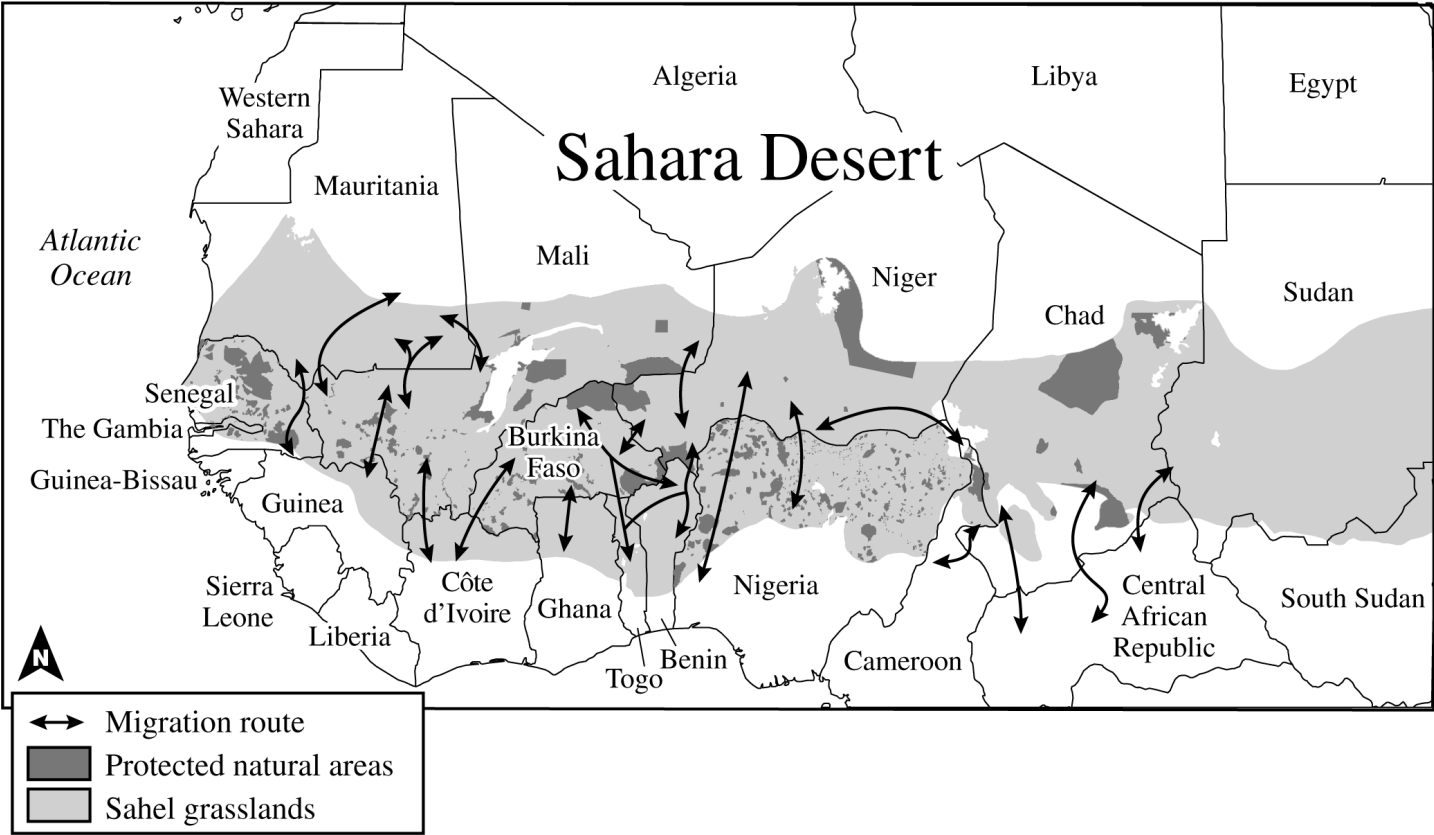
Source: World Bank, UNICEF

2. In 1990 the United Nations (UN) began using the Human Development Index (HDI) to measure levels of development. In 2015 the UN established the Sustainable Development Goals (SDGs) to set targets for environmental quality, economic development, and social programs.
- A. Using the data categories in the table, identify ONE indicator that is used to calculate HDI scores.
 - B. Using a different indicator than the one identified in part A, explain why Brazil's HDI score is higher than that of Afghanistan.
 - C. The UN and many countries have promoted sustainability principles. Describe ONE specific way that sustainability goals can respond to economic challenges.
 - D. Explain ONE reason why increasing women's access to education is likely to affect a country's total fertility rate.
 - E. SDG 8 is to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all." Explain ONE way in which a country's development of ecotourism might affect economic growth.
 - F. Using data from the table, explain how access to clean-burning fuels for people's homes relates to the life expectancy of a country's population.
 - G. Explain how ONE of the countries in the table would be classified according to Rostow's stages of economic growth.

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Question 3

PASTORAL NOMADISM IN THE SAHEL REGION OF AFRICA



Source: Food and Agriculture Organization

The Sahel is an environmental transition zone between the Sahara desert and the wet tropical forest regions of Africa. The landscape is a semiarid grassland, having distinct dry and wet seasons, and the region is interspersed with shrubs and small woodlands.

SOURCES OF TENSION RELATED TO PASTORAL NOMADISM

Groups	Potential Sources of Tension
Nomadic herders versus crop farmers	• Damage to fields by migrating herds • Overgrazing by migrating herds • Competition for access to water • Increasing size of crop farms
Nomadic herders versus conservation organizations	• Grazing of protected areas • Degradation of natural habitats
Nomadic herders versus government officials	• Failure to follow regulations on cross-border migration • Activities such as smuggling foreign goods

Source: Organisation for Economic Co-operation and Development

7.4 Women and Economic Development

Name: _____ Class: _____ Date: _____

Total: 10 marks

KEY WORDS microloans 小额贷款 • gender inequality index 性别不平等指数 • women and economic development 妇女与经济发展
• development 发展

Objective

Build the skills to answer exam questions on **women and economic development** 妇女与经济发展.

You must be able to:

- explain how the **Gender Inequality Index** 性别不平等指数 (GII) measures development
- explain how female education and work raise development
- define **microloans** 小额贷款 and their aim
- link women's empowerment to economic growth

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Measuring gender inequality

The **GII** measures inequality between men and women in health, empowerment, and the labour market — high inequality holds development back.

■ Women and growth

Educating and employing women raises household income, lowers fertility, and improves children's health and schooling — boosting development.

■ Microloans

Microloans are small loans to poor entrepreneurs, often women, to start small businesses — helping lift families out of poverty.

2 Practice

2.1 State what the Gender Inequality Index measures. [2]

2.2 Define a microloan and state its aim. [2]

2.3 A programme gives microloans to women to start businesses.

(a) State one direct effect on the women's families. [1]

(b) Explain how this supports national development. [1]

3 Exam-style questions

3.1 The GII measures inequality between men and women in health, empowerment, and [1]

- **A** climate
- **B** the labour market
- **C** map projections
- **D** carrying capacity

3.2 Small loans to poor entrepreneurs to start businesses are [1]

- **A** remittances
- **B** microloans
- **C** tariffs
- **D** subsidies to exporters

3.3 A country expands girls' education and women's employment.

(a) Predict the effect on its GII. [1]

(b) Explain one economic benefit. [1]

Solutions

2.1 inequality between men and women in health, empowerment, and the labour market.

2.2 a very small loan to a poor entrepreneur; it lets them start a small business and raise income.

2.3 (a) higher income, better nutrition, or children's schooling. (b) empowered, productive women raise output and lower inequality, aiding development.

3.1 B. GII covers health, empowerment, and the labour market.

3.2 B. small startup loans to the poor = microloans.

3.3 (a) the GII improves (less inequality). (b) a larger, more productive workforce raises output and incomes.

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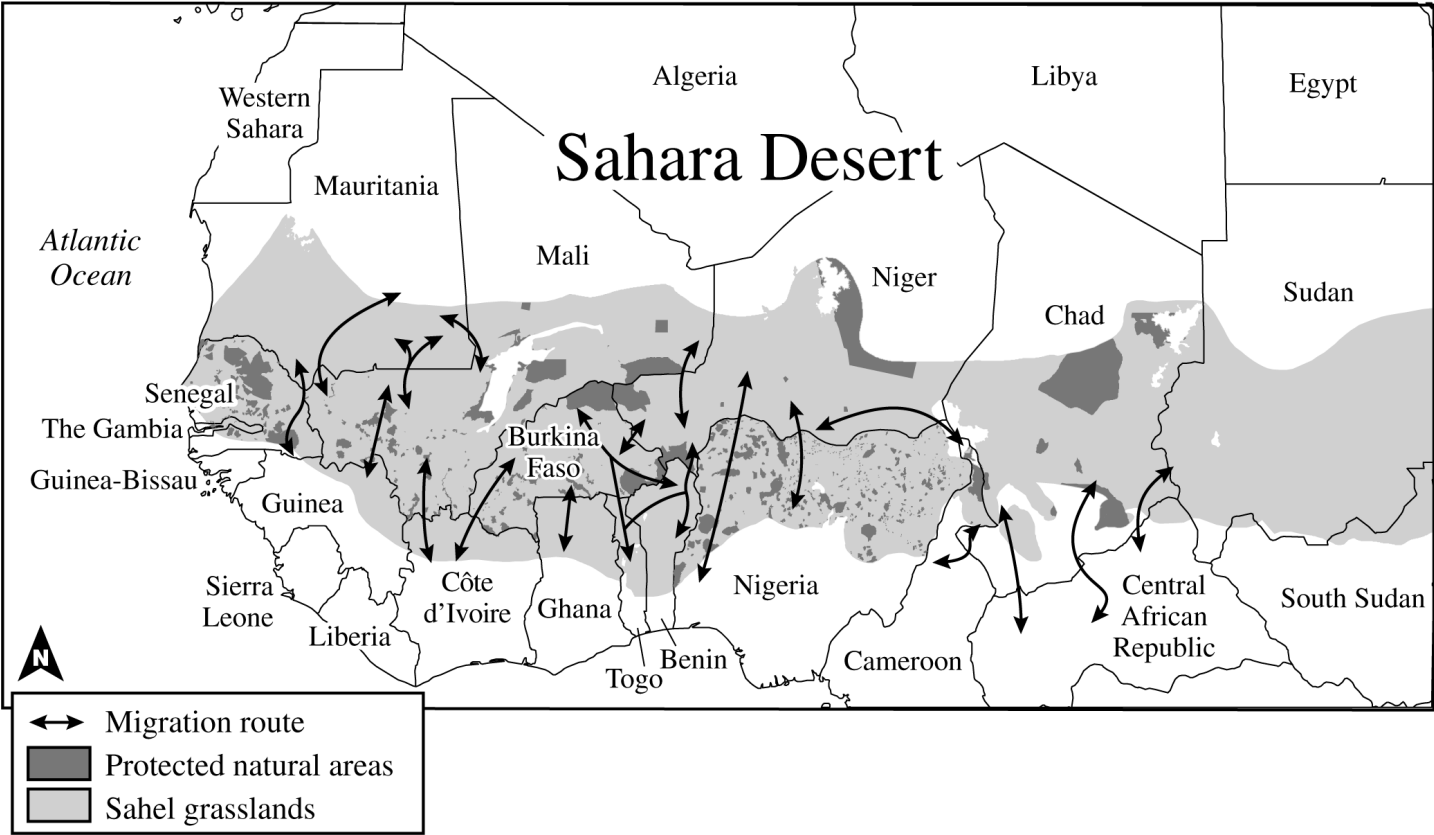
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Source: Food and Agriculture Organization

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Source: Organisation for Economic Co-operation and Development

7.5 Theories of Development

Name: _____ Class: _____ Date: _____

Total: 10 marks

KEY WORDS periphery 边缘 • dependency theory 依附理论 • dependency 依附 • semi-periphery 半边缘
• rostow's stages 罗斯托阶段

Objective

Build the skills to answer exam questions on **theories of development** 发展理论.

You must be able to:

- outline **Rostow's stages** 罗斯托阶段 of growth
- outline **Wallerstein's world-systems theory** 世界体系理论 (core/periphery/semi-periphery)
- explain **dependency theory** 依附理论
- compare a strength and a criticism of these models

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Rostow's stages

Rostow's model says countries pass through five stages from traditional society to high mass consumption, driven by investment and a 'take-off'.

■ World-systems theory

Wallerstein divides the world into a wealthy **core**, a poor **periphery** that supplies labour/raw materials, and a **semi-periphery** in between.

■ Dependency theory

Dependency theory argues poorer countries are kept poor by their dependent role in a global system that benefits richer core countries.

2 Practice

2.1 Outline the basic idea of Rostow's model. [2]

2.2 Describe the core and the periphery in world-systems theory. [2]

2.3 A poor country exports raw materials to rich countries and stays poor.

(a) Which theory best explains this? [1]

(b) State one criticism of Rostow's model. [1]

3 Exam-style questions

3.1 In world-systems theory, countries that supply cheap labour and raw materials to wealthy nations are the [1]

- **A** core
 - **B** periphery
 - **C** semi-periphery
 - **D** hearth
-

3.2 Rostow's model describes development as a series of [1]

- **A** rings
 - **B** five stages
 - **C** boundaries
 - **D** sectors of a city
-

3.3 A model claims rich countries keep poor ones dependent.

(a) Name the theory. [1]

(b) State one strength and one weakness of using such models.

[1]

Solutions

2.1 countries develop through fixed stages from traditional to high mass consumption, driven by investment and take-off.

2.2 the core is wealthy and dominates; the periphery is poorer and supplies raw materials/cheap labour.

2.3 (a) dependency theory / world-systems. (b) it assumes all countries follow the same Western path and ignores global barriers.

3.1 B. poorer supplier nations are the periphery.

3.2 B. Rostow's model has five stages of growth.

3.3 (a) dependency theory. (b) strength: highlights global inequality; weakness: can be too pessimistic/deterministic.

**SELECTED TECHNOLOGY RESEARCH AND DEVELOPMENT AREAS
IN THE MEDICAL FIELD**

Category	Product or Service
Biotechnology:	• Genetic engineering research • Biochemistry research • Diagnostic and testing science
Gene therapies:	• Cancer treatments • Neurological treatments • Rare and genetic disease treatments • Antiviral treatments and vaccines (e.g., Moderna)

3. Since the 1980s, the northeastern United States has developed into a major global center of high-technology industry that specializes in the medical field.
- Describe the spatial pattern of the companies and institutions shown in the inset map.
 - Describe the concept of a growth pole.
 - Explain ONE way education infrastructure affects a region's potential for high-technology development.
 - Explain how the pattern shown on the map resembles the galactic city model.
 - Explain ONE way local economic changes may be a result of deindustrialization.
 - Explain how the products and services listed in the table demonstrate that this economy has moved into the quaternary sector.
 - The map focuses on a regional scale. Explain a possible limitation of drawing country scale conclusions from a regional scale map.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

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Question 2**DEVELOPMENT INDICATORS FOR SELECTED COUNTRIES, 2020**

Country	Gross National Income per Capita	Percent of Workforce in Agriculture	Total Fertility Rate	Mean Years of Schooling Women/Men	Life Expectancy	Air Pollution Mortality Rate (per 100,000 people)	Percent of Population with Access to Clean-Burning Fuels
Afghanistan	\$1,976	39%	4.5	1.9 / 6.0	61	211	32%
Brazil	\$10,857	9%	1.7	8.0 / 7.7	69	30	96%
Finland	\$46,343	3%	1.6	12.6 / 12.3	81	7	100%

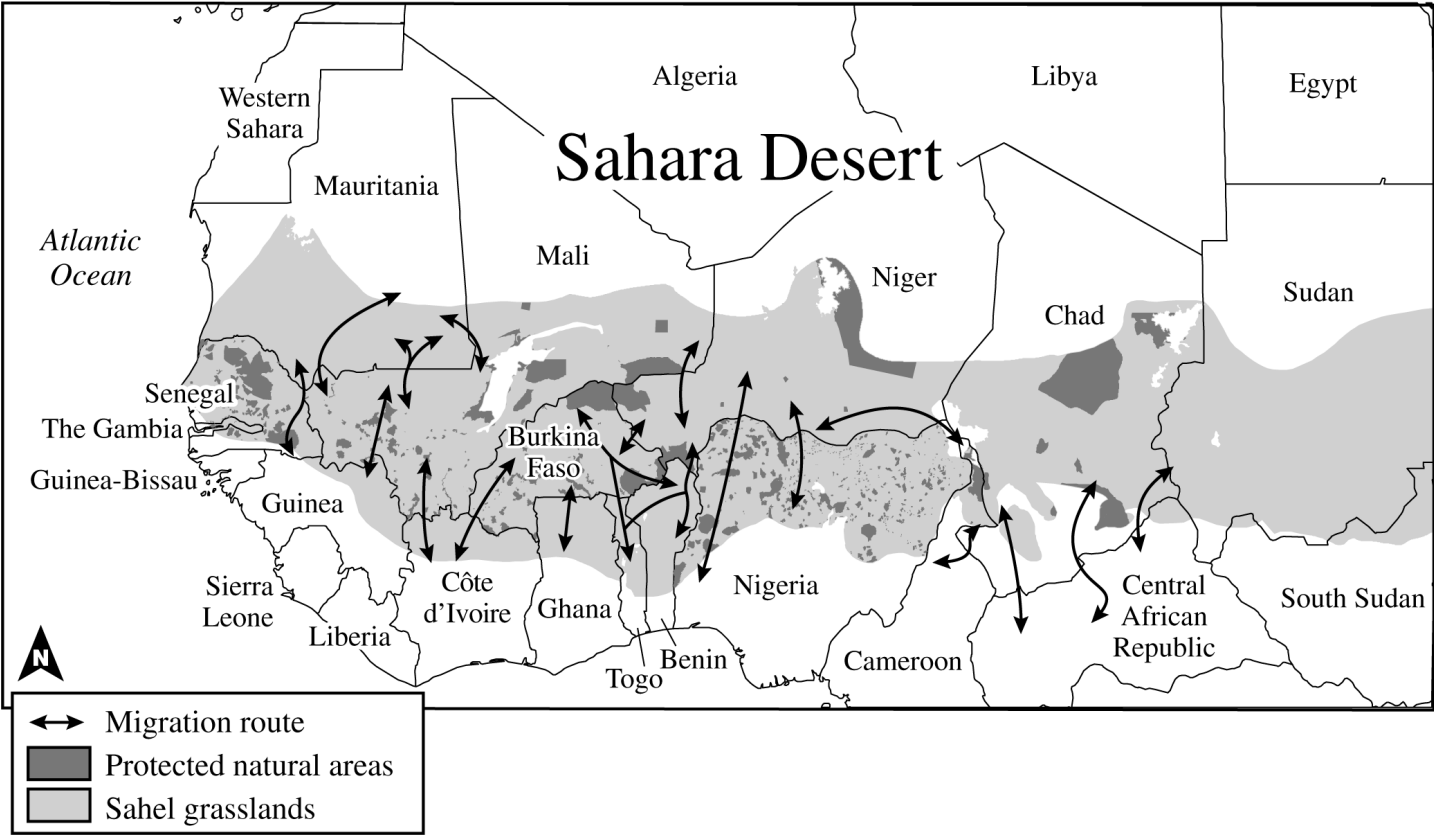
Source: World Bank, UNICEF

2. In 1990 the United Nations (UN) began using the Human Development Index (HDI) to measure levels of development. In 2015 the UN established the Sustainable Development Goals (SDGs) to set targets for environmental quality, economic development, and social programs.
- A. Using the data categories in the table, identify ONE indicator that is used to calculate HDI scores.
 - B. Using a different indicator than the one identified in part A, explain why Brazil's HDI score is higher than that of Afghanistan.
 - C. The UN and many countries have promoted sustainability principles. Describe ONE specific way that sustainability goals can respond to economic challenges.
 - D. Explain ONE reason why increasing women's access to education is likely to affect a country's total fertility rate.
 - E. SDG 8 is to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all." Explain ONE way in which a country's development of ecotourism might affect economic growth.
 - F. Using data from the table, explain how access to clean-burning fuels for people's homes relates to the life expectancy of a country's population.
 - G. Explain how ONE of the countries in the table would be classified according to Rostow's stages of economic growth.

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Question 3

PASTORAL NOMADISM IN THE SAHEL REGION OF AFRICA



Source: Food and Agriculture Organization

The Sahel is an environmental transition zone between the Sahara desert and the wet tropical forest regions of Africa. The landscape is a semiarid grassland, having distinct dry and wet seasons, and the region is interspersed with shrubs and small woodlands.

SOURCES OF TENSION RELATED TO PASTORAL NOMADISM

Groups	Potential Sources of Tension
Nomadic herders versus crop farmers	• Damage to fields by migrating herds • Overgrazing by migrating herds • Competition for access to water • Increasing size of crop farms
Nomadic herders versus conservation organizations	• Grazing of protected areas • Degradation of natural habitats
Nomadic herders versus government officials	• Failure to follow regulations on cross-border migration • Activities such as smuggling foreign goods

Source: Organisation for Economic Co-operation and Development

7.6 Trade and the World Economy

Name: _____ Class: _____ Date: _____

Total: 10 marks

KEY WORDS trade 贸易 • comparative advantage 比较优势 • tariff 关税 • complementarity 互补性
• free-trade agreement 自由贸易协定

Objective

Build the skills to answer exam questions on **trade** 贸易 and the world economy.

You must be able to:

- define **comparative advantage** 比较优势
- define a **tariff** 关税 and a **free-trade agreement** 自由贸易协定
- explain **complementarity** 互补性 in trade
- state one benefit and one cost of free trade

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Comparative advantage

Comparative advantage means a country should specialise in what it makes most efficiently and trade for the rest — raising total output.

■ Tariffs and free trade

A **tariff** is a tax on imports that protects home producers but raises prices. A **free-trade agreement** removes such barriers between member countries.

■ Complementarity

Trade thrives on **complementarity** — one country has what another wants and vice versa, giving both a reason to trade.

2 Practice

2.1 Define comparative advantage. [2]

2.2 Explain what a tariff does and one effect it has. [2]

2.3 Country A has cheap oil; Country B has advanced electronics.

(a) Name the trade principle that encourages them to trade. [1]

(b) State one benefit each country gains. [1]

3 Exam-style questions

3.1 A tax placed on imported goods is a [1]

- **A** subsidy
- **B** tariff
- **C** remittance
- **D** microloan

3.2 Comparative advantage suggests countries should [1]

- **A** produce everything themselves
- **B** specialise and trade
- **C** ban all trade
- **D** avoid manufacturing

3.3 Several countries form a free-trade agreement removing tariffs among them.

(a) State one benefit to consumers. [1]

(b) State one group that may be harmed. [1]

Solutions

2.1 specialising in what a country produces most efficiently and trading for the rest, raising total output.

2.2 it taxes imports; this protects domestic producers but raises prices for consumers.

2.3 (a) complementarity / comparative advantage. (b) each gets what it lacks more cheaply, raising welfare.

3.1 B. a tax on imports is a tariff.

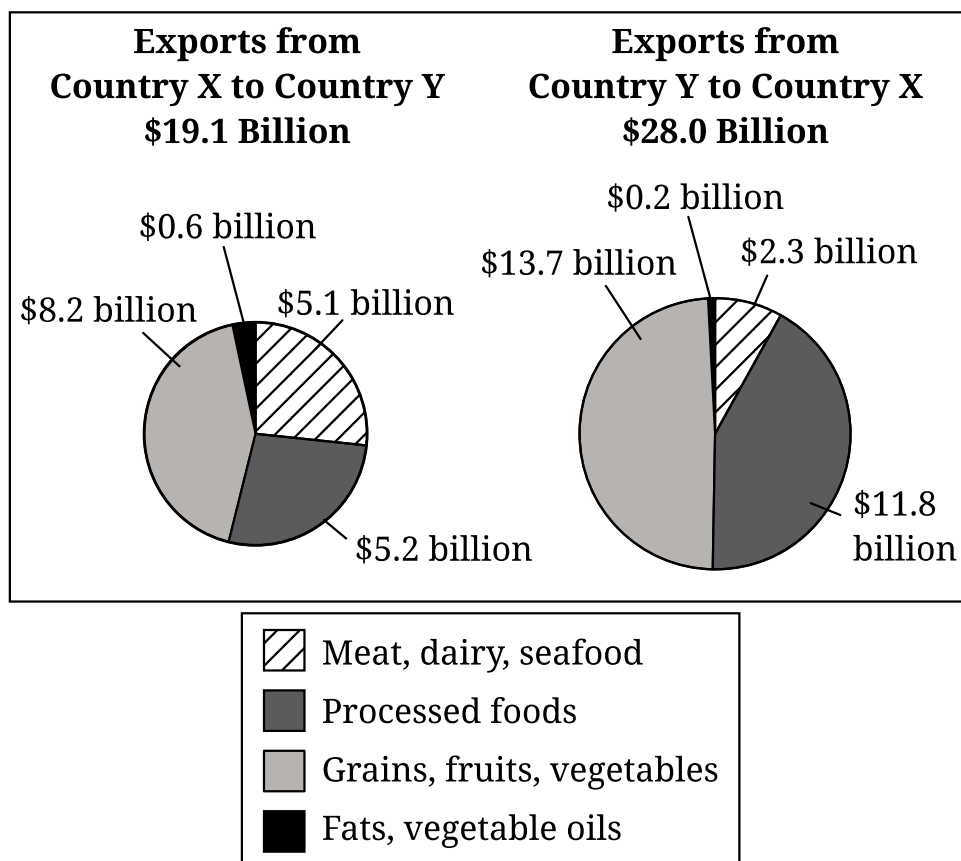
3.2 B. specialise in the efficient good and trade for the rest.

3.3 (a) cheaper, more varied goods. (b) domestic producers who now face more competition.

- 1.** The European Union (EU) and Association of Southeast Asian Nations (ASEAN) are supranational organizations composed of independent member states.

Respond to parts A, B, C, D, E, F, and G.

- A.** Define the concept of an independent state.
- B.** Describe one purpose of supranational organizations.
- C.** Describe one global outcome of an increase in international trade.
- D.** Explain how deindustrialization has affected the economy of core countries.
- E.** Explain why international boundaries on land or at sea may lead to disputes over resources.
- F.** Explain how supranational organizations such as the EU or ASEAN may challenge the sovereignty of member states.
- G.** Explain how advances in communication technologies may affect state sovereignty.

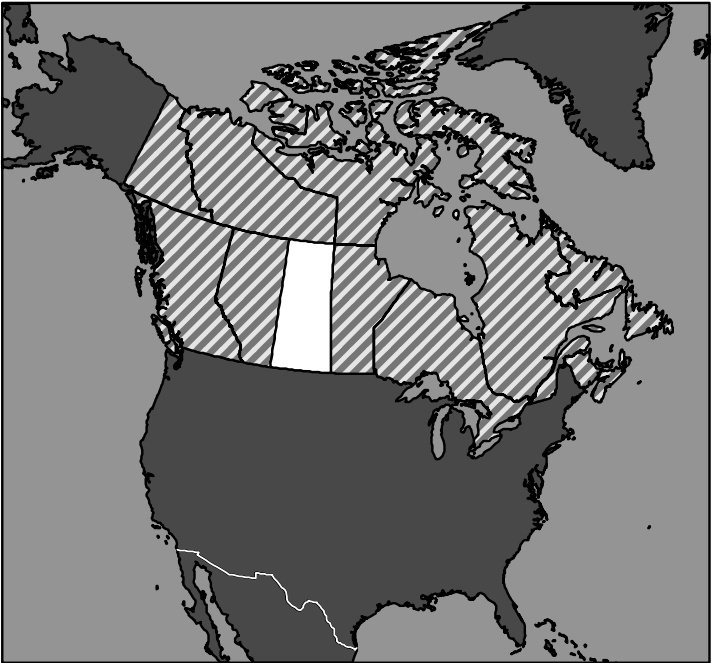
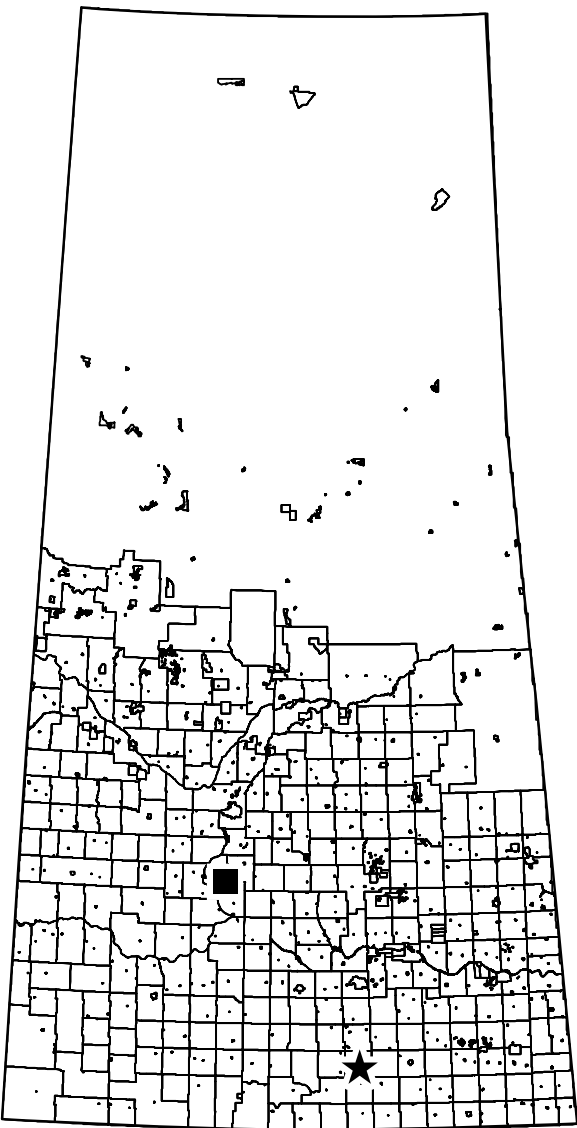
Food Exports Between Country X and Country Y

2. Country X and Country Y have a long-established trade relationship in agricultural products. Country X is a developed country, and Country Y is a developing country.

Respond to parts A, B, C, D, E, F, and G.

- Using the data in the charts, identify the largest food export category between the two countries.
- Using the data in the charts, describe the difference between the two countries in the meat, dairy, and seafood category.
- Define the concept of comparative advantage.
- Describe one effect of Green Revolution technologies on food supplies in developing countries.
- Explain how advances in agricultural technology may increase the carrying capacity of land.
- Explain the degree to which the economies of Country X and Country Y are interdependent. (Response must indicate the degree [low, moderate, high] and provide an explanation.)
- Explain how the charts provide limited information about economic development.

Map 1: Political Divisions in Saskatchewan, Canada



- Saskatchewan
- Other Canadian provinces and territories
- Other countries

0 100 miles

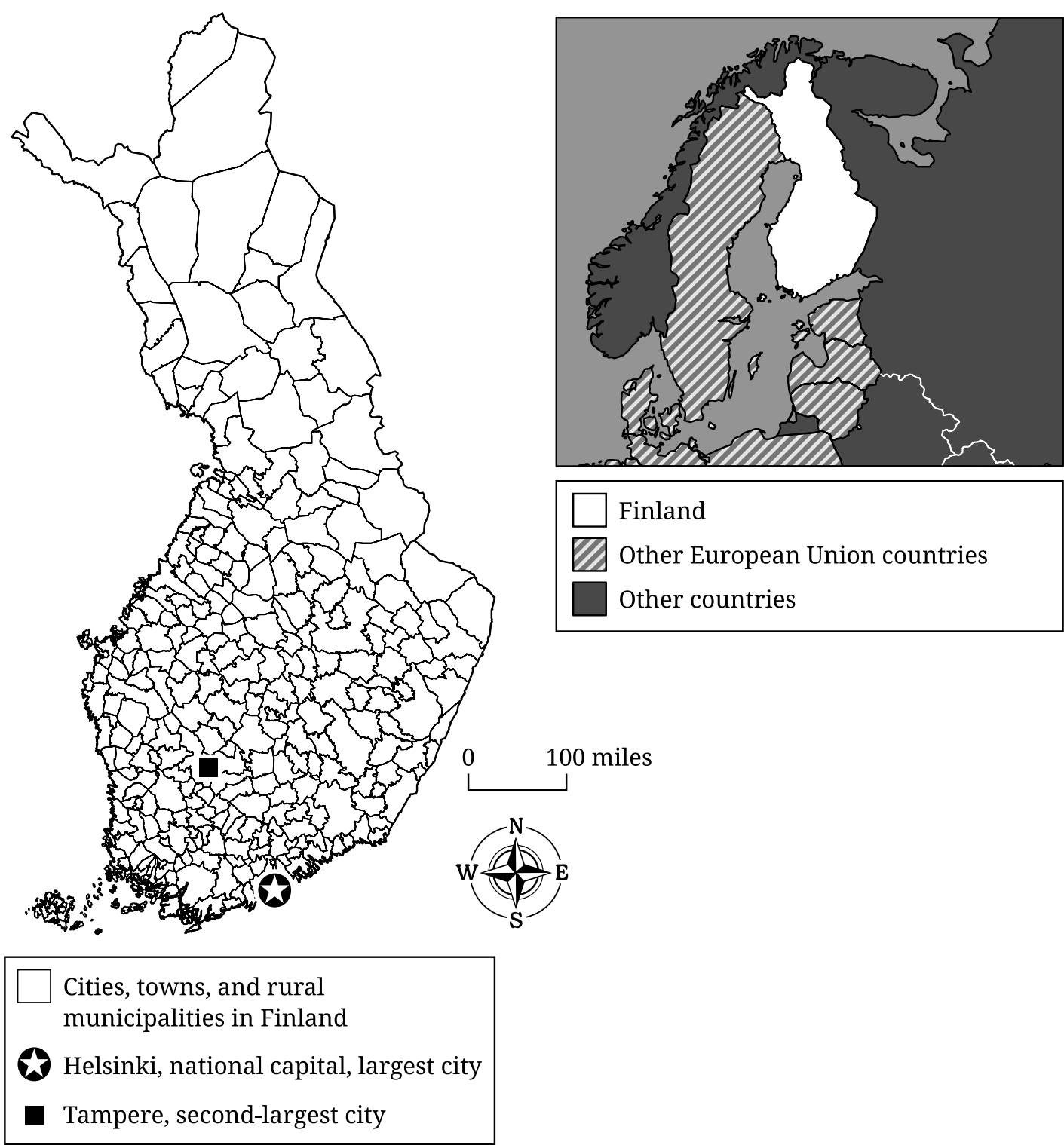


- Cities, towns, and rural municipalities in Saskatchewan
- ★

 Regina, provincial capital, second-largest city
- Saskatoon, largest city

Source: Statistics Canada

Map 2: Political Divisions in Finland



Source: ESRI Data Partners

7.7 Changes as a Result of the World Economy

Name: _____ Class: _____ Date: _____

Total: 10 marks

KEY WORDS deindustrialization 去工业化 • offshoring 离岸外包 • outsourcing 外包 • special economic zone 经济特区
• footloose industry 无固定区位产业

Objective

Build the skills to answer exam questions on **economic restructuring** 经济重构 and the world economy.

You must be able to:

- define **outsourcing** 外包 and **offshoring** 离岸外包
- define **deindustrialization** 去工业化
- explain a **special economic zone** 经济特区 (SEZ)
- define a **footloose industry** 无固定区位产业

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Outsourcing and offshoring

Outsourcing hires another firm to do a task; **offshoring** moves work to another country — usually to cut labour costs.

■ Deindustrialization and SEZs

Deindustrialization is the decline of manufacturing in a region as factories move away. A **special economic zone** offers tax breaks and looser rules to attract foreign industry.

■ Footloose industries

A **footloose industry** (e.g. software) is not tied to raw materials or markets, so it can locate almost anywhere.

2 Practice

2.1 State the difference between outsourcing and offshoring. [2]

2.2 Explain what a special economic zone is designed to do. [2]

2.3 Factories in an old industrial city close as production moves abroad.

(a) Name this process. [1]

(b) State one consequence for the city. [1]

3 Exam-style questions

3.1 Moving a company's call centre to another country to cut costs is [1]

- **A** deindustrialization
- **B** offshoring
- **C** a tariff
- **D** a greenbelt

3.2 A software company that can locate almost anywhere is a [1]

- **A** footloose industry
- **B** primary industry
- **C** break-of-bulk point
- **D** primate city

3.3 A developing country opens a special economic zone near a port.

(a) State one incentive it offers foreign firms. [1]

(b) Explain one benefit the country hopes to gain. [1]

Solutions

2.1 outsourcing = hiring another firm to do work; offshoring = moving that work to another country.

2.2 offer tax breaks/looser rules in a defined area to attract foreign investment and industry.

2.3 (a) deindustrialization. (b) job losses, decline, unemployment, or need to restructure.

3.1 B. relocating work abroad = offshoring.

3.2 A. not tied to inputs/markets = footloose industry.

3.3 (a) tax breaks, cheap land, or relaxed regulations. (b) foreign investment, jobs, technology, and exports.

- 1.** The European Union (EU) and Association of Southeast Asian Nations (ASEAN) are supranational organizations composed of independent member states.

Respond to parts A, B, C, D, E, F, and G.

- A.** Define the concept of an independent state.
- B.** Describe one purpose of supranational organizations.
- C.** Describe one global outcome of an increase in international trade.
- D.** Explain how deindustrialization has affected the economy of core countries.
- E.** Explain why international boundaries on land or at sea may lead to disputes over resources.
- F.** Explain how supranational organizations such as the EU or ASEAN may challenge the sovereignty of member states.
- G.** Explain how advances in communication technologies may affect state sovereignty.

**SELECTED TECHNOLOGY RESEARCH AND DEVELOPMENT AREAS
IN THE MEDICAL FIELD**

Category	Product or Service
Biotechnology:	• Genetic engineering research • Biochemistry research • Diagnostic and testing science
Gene therapies:	• Cancer treatments • Neurological treatments • Rare and genetic disease treatments • Antiviral treatments and vaccines (e.g., Moderna)

3. Since the 1980s, the northeastern United States has developed into a major global center of high-technology industry that specializes in the medical field.
- Describe the spatial pattern of the companies and institutions shown in the inset map.
 - Describe the concept of a growth pole.
 - Explain ONE way education infrastructure affects a region's potential for high-technology development.
 - Explain how the pattern shown on the map resembles the galactic city model.
 - Explain ONE way local economic changes may be a result of deindustrialization.
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 - The map focuses on a regional scale. Explain a possible limitation of drawing country scale conclusions from a regional scale map.

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7.8 Sustainable Development

Name: _____ Class: _____ Date: _____

Total: 10 marks

KEY WORDS sustainable development 可持续发展 • sustainable development goals 可持续发展目标
• ecotourism 生态旅游 • ecological footprint 生态足迹 • development 发展

Objective

Build the skills to answer exam questions on **sustainable development** 可持续发展.

You must be able to:

- define **sustainable development** 可持续发展
- define an **ecological footprint** 生态足迹
- explain **ecotourism** 生态旅游
- state the aim of the UN **Sustainable Development Goals** 可持续发展目标

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Sustainable development

Sustainable development meets present needs without harming the ability of future generations to meet theirs — balancing economy, society, and environment.

■ Ecological footprint

An **ecological footprint** measures how much land and resources a population uses; a footprint bigger than the Earth can renew is unsustainable.

■ Ecotourism and the SDGs

Ecotourism is low-impact travel that funds conservation and local communities. The UN **Sustainable Development Goals** are shared targets for ending poverty and protecting the planet by a set date.

2 Practice

2.1 Define sustainable development. [2]

2.2 Explain what an ecological footprint measures. [2]

2.3 A rainforest region promotes small-scale guided nature tours that fund conservation.

(a) Name this approach. [1]

(b) State one benefit to the local community. [1]

3 Exam-style questions

3.1 Development that meets today's needs without harming future generations' needs is [1]

- **A** sprawl
 - **B** sustainable development
 - **C** deindustrialization
 - **D** neocolonialism
-

3.2 A measure of how much land and resources a population consumes is its [1]

- **A** ecological footprint
 - **B** gravity model
 - **C** sex ratio
 - **D** tariff
-

3.3 A country adopts the UN Sustainable Development Goals.

(a) State the overall aim of the SDGs. [1]

(b) Explain one tension between economic growth and sustainability.

[1]

Solutions

2.1 meeting present needs without preventing future generations from meeting theirs.

2.2 the amount of land/resources a population uses; if larger than the Earth can renew, it is unsustainable.

2.3 (a) ecotourism. (b) income/jobs while protecting the environment.

3.1 B. balancing present and future needs = sustainable development.

3.2 A. resource-use measure = ecological footprint.

3.3 (a) to end poverty and protect the planet through shared global targets. (b) growth can raise resource use/pollution, which must be balanced against environmental limits.

Question 2**DEVELOPMENT INDICATORS FOR SELECTED COUNTRIES, 2020**

Country	Gross National Income per Capita	Percent of Workforce in Agriculture	Total Fertility Rate	Mean Years of Schooling Women/Men	Life Expectancy	Air Pollution Mortality Rate (per 100,000 people)	Percent of Population with Access to Clean-Burning Fuels
Afghanistan	\$1,976	39%	4.5	1.9 / 6.0	61	211	32%
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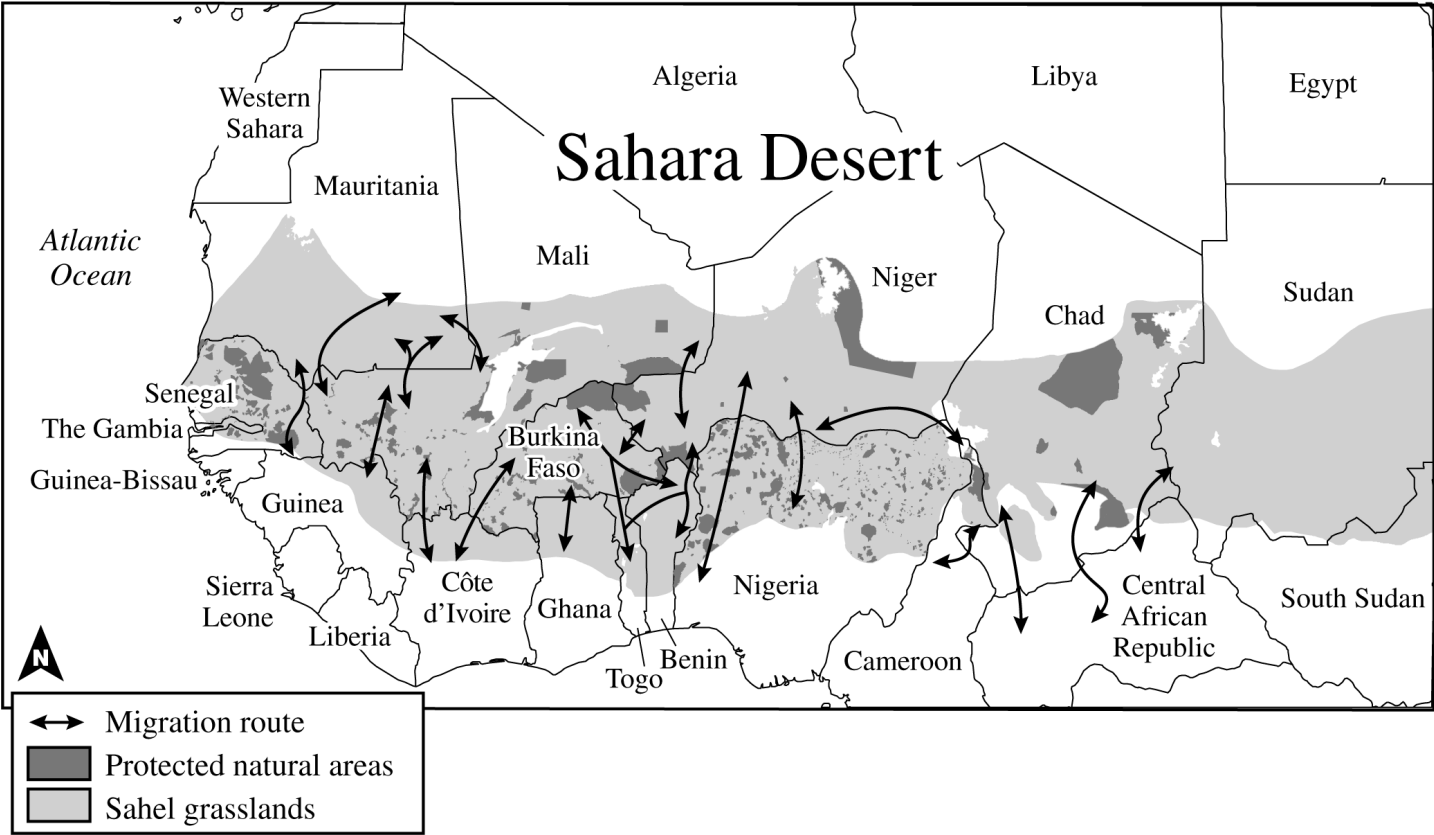
Source: World Bank, UNICEF

2. In 1990 the United Nations (UN) began using the Human Development Index (HDI) to measure levels of development. In 2015 the UN established the Sustainable Development Goals (SDGs) to set targets for environmental quality, economic development, and social programs.
- A. Using the data categories in the table, identify ONE indicator that is used to calculate HDI scores.
 - B. Using a different indicator than the one identified in part A, explain why Brazil's HDI score is higher than that of Afghanistan.
 - C. The UN and many countries have promoted sustainability principles. Describe ONE specific way that sustainability goals can respond to economic challenges.
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Question 3

PASTORAL NOMADISM IN THE SAHEL REGION OF AFRICA



Source: Food and Agriculture Organization

The Sahel is an environmental transition zone between the Sahara desert and the wet tropical forest regions of Africa. The landscape is a semiarid grassland, having distinct dry and wet seasons, and the region is interspersed with shrubs and small woodlands.

SOURCES OF TENSION RELATED TO PASTORAL NOMADISM

Groups	Potential Sources of Tension
Nomadic herders versus crop farmers	• Damage to fields by migrating herds • Overgrazing by migrating herds • Competition for access to water • Increasing size of crop farms
Nomadic herders versus conservation organizations	• Grazing of protected areas • Degradation of natural habitats
Nomadic herders versus government officials	• Failure to follow regulations on cross-border migration • Activities such as smuggling foreign goods

Source: Organisation for Economic Co-operation and Development