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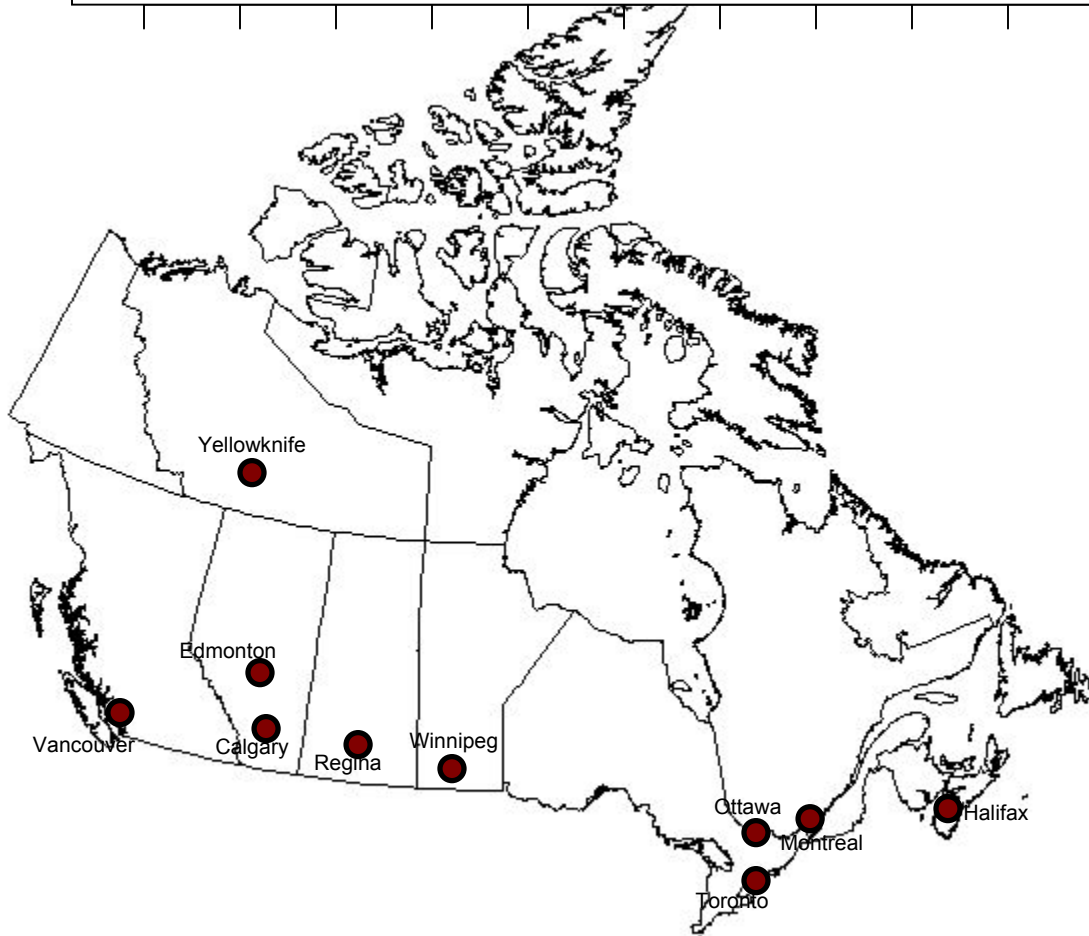
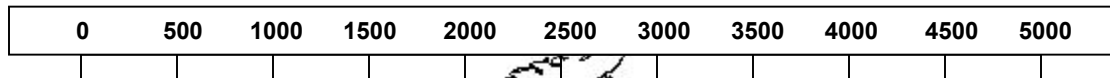
Class _____



Canada

Identify the **epicentre** of an earthquake in **Canada** using the following information. You will need to use your protractor to complete this question (Worth **5** marks)

Location	Vancouver	Yellowknife	Ottawa
Distance from Epicentre	4000 km	2500 km	2400 km



The **epicentre** of this earthquake - recorded by the cities in the table above - was

1. Minerals play an important role in your body's functions. Water is regulated in the body's cells by ...
 - A. molybdenum and potassium
 - B. bauxite and sulphur
 - C. sulphur and quartz
 - D. calcite and dolomite

2. Kidney stones are examples of
 - A. mineral deficiency
 - B. vitamin deficiency
 - C. lack of calcium in the bones
 - D. growing crystals in your body

3. Minerals can be identified by certain clues. The clue that identifies the way the mineral breaks is called its ...
 - A. streak
 - B. lustre
 - C. colour
 - D. cleavage

4. Cubic, tetragonal, hexagonal, orthorhombic, monoclinic and triclinic describe systems of ...
 - A. mineral hardness
 - B. synthetic models
 - C. cleavage types
 - D. crystal structure

5. Synthetic crystals are manufactured for such things as electronic circuits, credit cards, machines, medicines and communication devices, because natural crystals ...
 - A. are too expensive
 - B. are rare
 - C. are too soft
 - D. have impurities

6. Metamorphic rocks formed as a result of ...
 - A. rapidly decreasing temperatures
 - B. extreme temperature fluctuations
 - C. lower pressure and moisture
 - D. high temperature and pressure

7. Allison and Rachel were investigating the banks of the river and discovered a large section had been eroded away. They observed stratification, which identifies ...
 - A. fossils embedded in the rock
 - B. petroleum traces in the soil
 - C. soil minerals that have leached
 - D. visible layers of different soil types

8. Sedimentary rock is a type of rock that....
- A. forms below the earth's surface**
 - B. has changed form**
 - C. is only found near a volcano**
 - D. forms in layers**
9. The formation of different types of rocks is described in the Rock Cycle. An important feature of this cycle is that it ...
- A. cannot be reversed**
 - B. doesn't have any shortcuts or detours**
 - C. always forms rocks the same way**
 - D. does not have a set order**
10. A fertile soil is one that can supply nutrients for plant growth. To identify the different layers in a particular type of soil, a geologist would look at the ...
- A. organic components**
 - B. mineral content**
 - C. humus content**
 - D. soil profile**
11. Tony found that when he poured water into a crack in a rock sample and froze it, then allowed it to thaw, the crack was actually wider. The type of weathering he investigated was classified as ...
- A. chemical**
 - B. biological**
 - C. physical**
 - D. mechanical**
12. The Frank Slide in the Crowsnest Pass is an example of how weathering forces can be responsible for a sudden changes. When water gets in cracks and expands the rock can break away. This form of weathering is called ...
- A. winter weathering**
 - B. water deposition**
 - C. gravitational thrust**
 - D. frost wedging**
13. André tested the effects of acidic water on the natural rock samples found in his schoolyard. The type of weathering he was investigated is classified as ...
- A. chemical**
 - B. biological**
 - C. mechanical**
 - D. physical**
14. On a field trip to the foothills, the students noticed a tree's roots growing through rock. This type of weathering is classified as ...
- A. chemical**
 - B. physical**
 - C. mechanical**
 - D. biological**

15. The same field trip included a stop at the 'Big Rock' in Okotoks. A receding glacier left behind this rock, which is called ...
- A. an abrasion
 - B. a moraine
 - C. a striation
 - D. an erratic
16. Compared to the other layers of the Earth, the crust is ...
- A. thicker than the upper mantle
 - B. thicker than any other layer
 - C. thicker than the lower mantle
 - D. thinner than all the layers
17. Alfred Wegner's Theory of Continental Drift determined that the continents at one time all fit together to form one large super continent, called Pangaea.. His evidence was their interlocking shapes and ...
- A. discovery of land bridges connecting the continents
 - B. different trees on different continents
 - C. lower ocean level with islands close together
 - D. similar fossil remains found on different continents
18. Wegener proved that glaciers once existed in the southern hemisphere. His evidence were the ...
- A. moraines found
 - B. erratics found
 - C. ice caves
 - D. bedrock abrasions
19. Advances in technology, like the magnetometer, led scientists to develop the theory of sea-floor spreading because of the....
- A. behavioural patterns of whales
 - B. radar and sonar waves
 - C. magnetic variations at the surface
 - D. magnet reversals on the ocean floor
20. When scientists discovered the ridges along the ocean floor, they also found lava coming out of the cracks. This type of lava is called ...
- A. sea-floor lava
 - B. ocean lava
 - C. saltwater lava
 - D. pillow lava
21. The San Diego Zoo is able to get early warnings of possible earthquakes because ...
- A. they have the best seismic equipment
 - B. they are directly over the most active fault
 - C. scientists believe this area will be hit first
 - D. animals can sense the start of an earthquake

22. Seismologists use a special machine that measures earthquakes. The fastest of all three types of seismic waves are the p waves. They are called ...
- A. principal waves
 - B. pretty waves
 - C. pin waves
 - D. primary waves
23. An earthquake in Japan registers on a seismograph in Winnipeg, Manitoba. This occurs because ...
- A. seismographs anywhere will record all earthquakes
 - B. the earth's crust is solid, allowing the surface waves to be recorded anywhere
 - C. the inner core of the earth is liquid
 - D. the outer core of the earth is liquid
24. The source of an earthquake can be determined by recording the interval time between the p waves and s waves. Where the earthquake starts from is called the ...
- A. foci
 - B. focus
 - C. shadow zone
 - D. epicentre
25. The pressure under the earth's crust can cause the plates to move in different ways. A fault that causes plates to move sideways is called a ...
- A. transform fault
 - B. reverse fault
 - C. normal fault
 - D. strike-slip fault
26. Volcanoes erupt when they become active. Until an eruption occurs, volcanoes are described as ...
- A. stagnant
 - B. extinct
 - C. plugged
 - D. dormant
27. There are a number of volcanoes that border the pacific ocean and are known as ...
- A. Hell's Kitchen
 - B. Circle of Fire and Ice
 - C. Rapid Change Zone
 - D. Ring of Fire
28. An earthquake or an erupting sea-floor volcano can cause a 'Tsunami'. In *Japanese* it means ...
- A. lava flow
 - B. ash plume
 - C. shaking ground
 - D. high wave

29. Vesuvius has been a dormant volcano since 1944, but is due for a major eruption. An added danger, besides the major build-up of magma beneath the peak is the discovery of a rock ...
- A. bulge
 - B. plume
 - C. vent
 - D. plug
30. Despite the hot temperatures and fiery destruction they can create, volcanoes can also lower world temperatures with ...
- A. a rapid lava flow into the ocean
 - B. an ash plume causing mudflows
 - C. a large number of tsunamis
 - D. an ash layer in the atmosphere
31. When older rock ends up on top of younger rock the type of mountains formed are called ...
- A. thrust mountains
 - B. fault mountains
 - C. block mountains
 - D. fault block mountains
32. When sedimentary rock is squeezed from the sides and is too brittle to fold, it can break and form into slabs that move up and over each other. This is an example of ...
- A. diverging fault
 - B. folded layering
 - C. sliding fault
 - D. thrust fault
33. This factor might be the best way to determine the age of a mountain.
- A. syncline
 - B. anticline
 - C. kinds of rocks
 - D. shape of peak
34. Mountain formations that undergo more than one process are called ...
- A. transform
 - B. compound
 - C. multi-faulted
 - D. complex
35. The preserved remains (even the soft parts) of a plant or animal can most likely be found in ...
- A. Burgess Shale
 - B. sediment
 - C. gemstones
 - D. amber

36. Trilobites are one of the most famous groups of fossils. They are now extinct. They lived in ...
- A. Gobi Desert
 - B. Antarctic Tundra
 - C. fresh water lakes
 - D. warm ocean water
37. An important discovery in Glacier National Park, Montana, provided evidence that dinosaurs were related to birds. The 14 year-old boy found a ...
- A. Velociraptor
 - B. Trilobite
 - C. Albertosarus
 - D. Bambiraptor
38. When an organism is buried under many layers of sediment, pressure and heat build up, leaving a thin film of carbon residue forming the outline of the organism on the rock surface. This residue is called ...
- A. petrified residue
 - B. trace fossil residue
 - C. carbon-dated remains
 - D. carbonaceous film
39. When an organism falls into soft sediment, its hard parts dissolve, leaving a cavity called a ...
- A. cast
 - B. trace layer
 - C. chamber
 - D. mould
40. Scientists studying rock layers were mystified to find fossils that helped to determine the relative age of the layer of rock they were studying. These fossils are called ...
- A. petrified fossils
 - B. intensified fossils
 - C. parent fossils
 - D. index fossils
41. Daughter material and parent material refer to the half-life parts remaining, in the process of radiometric dating, to calculate the absolute age of rocks. If the daughter material is 75% and the parent material is 25%, the rock has undergone ...
- A. 3 half-lives
 - B. 4 half-lives
 - C. 1 half-life
 - D. 2 half-lives
42. Radiometric dating and radiocarbon dating are related because ...
- A. half-life is the same for carbon and uranium
 - B. traces of carbon-14 can also be found in radiometric dating
 - C. radiocarbon dating is a form of radiometric dating
 - D. radiometric dating is a form of radiocarbon dating

43. According to the Geologic Time Scale, dinosaurs appeared in this period.
- A. Permian
 - B. Cretaceous
 - C. Jurassic
 - D. Triassic
44. Bitumen, coal, oil and gas are most often found in sedimentary rock basins. These basins were formed from the sediments of tiny plants and animals deposited in the mud and silt. Naturally occurring mixtures of hydrocarbons are called ...
- A. oil sands
 - B. oil wells
 - C. petrochemicals
 - D. petroleum
45. A sample of the layers of rock and soil beneath the surface are analyzed in government laboratories. The samples that are analyzed are called ...
- A. till and fault samples
 - B. bitumen samples
 - C. strata findings
 - D. core samples