

Name: _____

Date: _____ Period: _____

Regents Review

The Physical Setting: Earth Science

Regents Review: Earth Science Reference Tables

Direction: use the Earth Science Reference Tables to answer all questions on a separate piece of paper.

Equations:

1. What is the equation for density?
2. What is the density of a substance when the volume is 5.0 cm^3 and the mass is 25 grams?
3. What is the gradient if a student measures the ground temperature to be 30° C and directly two meters above that same location 35° C ?

Generalized Landscape Regions of New York State:

1. Long Island is apart of what landscape region?
2. How many landscape regions are there in New York State?
3. What is the northern most New York State landscape region?
4. What is the southern most New York State landscape region?
5. What is the eastern most New York State landscape region?

Generalized Bedrock Geology of New York State:

1. What type of rock is Slide Mountain?
2. What is the latitude and longitude of Slide Mountain?
3. What geological period does the rock around Syracuse come from?
4. What rock type and geologic period do rocks from Long Island come from?
5. What is the latitude and longitude of Binghamton?

Surface Ocean Currents:

1. What is the current that runs along the eastern coast of the United States?
2. What is the current that runs along the western coast of the United States?
3. What type of current is the Brazil Current?
4. What type of current is the Labrador Current?

Tectonic Plates:

1. What type of plate boundary is the San Andreas Fault?
2. What type of plate boundary is the Aleutian Trench?
3. What type of plate boundary is the Peru-Chile Trench?
4. What is the latitude and longitude of the Hawaiian Hot Spot?

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Rock Cycle

1. How can a sedimentary rock change to an igneous rock?
2. How can an igneous rock change to a metamorphic rock?
3. How can a metamorphic rock change to a sedimentary rock?

Relationship of Transported Particle Size to Water Velocity

1. What is the minimum size of a cobble?
2. What is the maximum size of a pebble?
3. What is the smallest sized particle?
4. What is the largest sized particle?

Scheme for Igneous Rock Identification

1. What is the environment of formation for granite?
2. What is the grain size for very coarse textures?
3. Name two rocks that are vesicular?
4. What is the environment of formation for pumice?
5. Name two rocks that have a light color and felsic composition?

Scheme for Sedimentary Rock Identification

1. What rock consists of rounded fragments?
2. This sedimentary rock consists of compacted plant remains?
3. Name an organic rock cemented together by calcite?
4. What clastic rock consists of the smallest grain size?
5. What is rock salts composition?

Scheme for Metamorphic Rock Identification

1. What type of texture does Gneiss have?
2. What rock was formed by contact metamorphism?
3. Name a coarse grained, non-foliated rock?
4. Which rock comes from the metamorphism of sandstone?
5. What rock will bubble with acid (HCl)?

Inferred Properties of Earth's Interior:

1. What is the density of the continental crust?
2. What is the density of the oceanic crust?
3. What is the temperature at the boundary between the Outer Core and the Inner Core?
4. What is the pressure at the boundary between the Outer Core and the Inner Core?
5. What is the density of the stiffer mantle?

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Earthquake P-wave and S-wave Travel Time:

1. What is the minimum number of seismic stations needed to locate the epicenter of an earthquake?
2. If an earthquake's epicenter is 3000 km away from a seismograph station; approximately how long did the p-wave take to arrive to the seismograph station?
3. A p-wave took 3 minutes and 20 seconds to reach a seismic station; approximately how long did it take for the s-wave to reach the same station?
4. A p-wave arrives at 3:00 and the s-wave arrives at 3:07:20, what is the exact distance that the seismic station is away from the epicenter?
5. If a p-wave arrived at a seismic station at 12:10 and the s-wave arrived at 12:17, what is the time of origin of the earthquake?

Dewpoint Temperatures:

1. What is the dewpoint if the dry bulb temperature is 16° C and the wet bulb temperature is 10° C?
2. What is the dewpoint if the dry bulb temperature is 10° C and the wet bulb temperature is 8° C?
3. What is the wet bulb temperature if the dewpoint is 9° C and the dry bulb temperature is 16° C?
4. What is the dewpoint if the dry bulb temperature is 18° C and the wet bulb temperature is 15° C?

Relative Humidity:

1. What is the relative humidity if the dry bulb temperature is 16° C and the wet bulb is 10° C?
2. What is the relative humidity if the dry bulb temperature is 10° C and the wet bulb is 8° C?
3. What is the wet bulb temperature if the relative humidity is 9° C and the dry bulb is 16° C?
4. What is the relative humidity if the dry bulb temperature is 18° C and the wet bulb is 15° C?

Temperature:

1. If the temperature is 10° C, what is the equivalent Fahrenheit temperature?
2. What is 20° C equal to in Fahrenheit?
3. What is 160° F equal to in Kelvin?

Pressure:

1. If the pressure was recorded to be 992.0 millibars. How many inches of Mercury is that equal to?
2. What is 1000.0 millibars equal to in inches of mercury?
3. How many millibars is 30.00 inches of mercury equal to?

Selected Properties of Earth's Atmosphere:

1. What is the boundary between the stratosphere and the mesosphere?
2. What is the boundary between the mesosphere and the thermosphere?
3. Does temperature increase or decrease in the troposphere?
4. Does temperature increase or decrease in the mesosphere?
5. Does pressure increase or decrease in the troposphere?

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Electromagnetic Spectrum

1. What has the largest wave length?
2. What has the smallest wavelength?
3. What part of visible light has the smallest wave length?
4. What part of visible light has the largest wave length?
5. What part of the electromagnetic spectrum is on either side of visible light?

Planetary Winds and Moisture Belts:

1. Which way do the planetary winds blow between 30°N and 60°N?
2. Does the equator experience wet or dry weather?
3. At 30° S latitude, are the winds diverging or converging?

Luminosity and Temperature of Stars

1. What is the most massive type of stars?
2. What is the name of the smallest star on the Luminosity and Temperature of Stars chart?
3. How many times more luminous is Aldebaran then our Sun?
4. What is the approximate temperature of Polaris?
5. Name three stars that are apart of the main sequence?
6. The hottest stars are what color?
7. The coolest stars are what color?
8. Betelgeuse is how many times brighter then our Sun?
9. What is luminosity?
10. What is the temperature of our Sun?

Solar System Data

1. What is the mean distance of Mercury from the Sun?
2. What is the period of revolution of Venus?
3. What is the eccentricity of Mars's orbit?
4. What is Saturn's density?
5. What is Earth's equatorial diameter?
6. Which planet has the most eccentric orbit?

Properties of Common Minerals

1. What is magnetite hardness?
2. What two minerals bubble with acid?
3. What minerals composition is SiO₂?
4. Which mineral can have both a metallic and nonmetallic luster?
5. What mineral is used in pencil lead?
6. Does fluorite have cleavage or fracture?