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TOSS-UP

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Militation # # 18 18

- Mysithte Mar No. 18 18. 1) PHYSICAL SCIENCE *Multiple Choice* A child's seesaw would be considered:
 - W) a complex machine
 - X) a form of inclined plane
 - Y) a compound lever
 - Z) a class 1 lever

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ANSWER: Z) A CLASS ONE LEVER

BONUS, W. W.

1) PHYSICAL SCIENCE Short Answer A 100-watt light bulb is lighted by a 100 volt power source. What is the current, in amperes, running through the bulb?

ANSWER: 1 AMPERE

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W.

(Solution: current = watts/volts; 100/100 = 1 ampere)

TOSS-UP

- 2) LIFE SCIENCE Multiple Choice Which of the following is the scientific name for the part of the human brain where higher brain operations occur such as thinking, imagination, mathematical reasoning and language:
 - W) cerebral cortex
 - X) cerebellum
 - Y) medulla oblongata
 - Z) hypothalamus

ANSWER: W) CEREBRAL CORTEX

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BONUS

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2) LIFE SCIENCE Short Answer What is the common botanical term for the response a cell or plant has towards or away from a stimulus?

ANSWER: TAXIS

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3) GENERAL SCIENCE *Short Answer* What layer of the Sun's atmosphere is immediately interior to the corona?

ANSWER: THE CHROMOSPHERE

BONUS

3) GENERAL SCIENCE Short Answer How many angstroms are in 1 micron?

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ANSWER: 10,000

TOSS-UP

- 4) LIFE SCIENCE *Multiple Choice* What is the joint that is formed by the articulation of the tibia, fibula, and femur?
- W) wrist
- X) knee

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- Y) elbow
- Z) ankle

ANSWER: X) KNEE

BONUS

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- 4) LIFE SCIENCE *Multiple Choice* The exchange of gases between blood and the tissue occurs normally in:
- W) venules
- X) arterioles
- Y) veins

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Z) capillaries

ANSWER: Z) CAPILLARIES

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5) MATH Short Answer What does 12 times 13 divided by 2 equal?

ANSWER: 78

ANSWER: 78

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BONUS

5) MATH *Short Answer* Four factorial equals what number?

ANSWER: 24

TOSS-UP

Mylithia Mar At 13 190 6) EARTH SCIENCE Short Answer During which month does the vernal equinox occur?

ANSWER: MARCH

BONUS

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6) EARTH SCIENCE Short Answer The temperature at which the relative humidity reaches 100% and condensation starts is called the: Millinin 教教教·婆 然 Millinin Art Art 18 180 Militalle Mark of 180

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ANSWER: DEW POINT

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7) GENERAL SCIENCE Short Answer Sigmund Freud proposed the idea that the subconscious mind exited in three separate divisions two of which he called the ego and the superego. What was the third?

ANSWER: THE ID

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BONUS

- 7) GENERAL SCIENCE Multiple Choice Galaxies are:
- W) clouds of gases around stars

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- X) clusters of billion of stars
- Y) rare in the universe
- Z) always spherical in shape

ANSWER: X) CLUSTERS OF BILLION OF STARS

TOSS-UP

8) PHYSICAL SCIENCE Short Answer The amount of heat needed to increase the temperature of 1.00 gram of water from 14.5°C to 15.5°C is defined as what unit of measurement?

ANSWER: CALORIE

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8) PHYSICAL SCIENCE Short Answer What is the chemical formula for hydrogen peroxide? -al 家^妹^妹 Military of the State of the St Milling 教教教學 Militate state it is

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ANSWER: H₂O₂

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9) EARTH SCIENCE Multiple Choice Which of the following minerals best illustrates the property of cleavage:

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W) quartz

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- X) diamond
- Y) topaz
- Z) mica

ANSWER: Z) MICA

BONUS

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- 9) EARTH SCIENCE Multiple Choice Based on how it was formed, slate is classified as what type of rock:
- W) igneous
- Y) metamorphic Z) volcanic
- Z) volcanic

ANSWER: Y) METAMORPHIC

TOSS-UP

10) MATH Short Answer What is the name of the famous theorem of geometry that states the sum of the squares of a right triangle is equal to the square of the hypotenuse?

ANSWER: PYTHAGOREAN THEOREM (ACCEPT: PYTHAGOREAN OR PYTHAGORAS)

BONUS

10) MATH Short Answer What is the following Roman Numeral number equal to in an Arabic Militale Market 18 182 Militale the state of the state Militale ** ** ** motivile ** ** ** number: MCMLXI ANSWER: 1961

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11) PHYSICAL SCIENCE Multiple Choice The mass of a quantity of matter divided by its volume provides which specific property?

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W) weight

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- X) specific gravity
- Y) density
- Z) malleability

ANSWER: Y) DENSITY

BONUS

11) PHYSICAL SCIENCE Short Answer Assuming friction is negligible, if a lever has a mechanical advantage of 5, how much effort in newtons is peeded to 100.

ANSWER: 2 NEWTONS

(Solution: Force = resistance / mechanical advantage)

TOSS-UP

- Maritule Mark 18 180 12) LIFE SCIENCE Multiple Choice In 1665, what person, using a microscope he built, observed perforations in plant stems, which he called cells:
- W) Robert Hooke
- X) Anton Van Leewenhoek
- Y) Carolus Linnaeus
- Z) Theodor Schwann

ANSWER: W) ROBERT HOOKE

BONUS

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12) LIFE SCIENCE *Short Answer* What are the four main human blood types?

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ANSWER: O, A, B, AND AB

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Matinta 新光·養際 13) MATH *Short Answer* Solve the following equation: $\frac{x}{6} = -8$ ANSWER: -48

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BONUS

13) MATH *Short Answer* Find the area of a circle when the radius equals 10: Millinin 教教教·蒙豫 Millinin 教教教·婆 然

ANSWER: 314

(Solution: $A = \pi r^2$

TOSS-UP

Mylithe Mar hat 's PR 14) EARTH SCIENCE Short Answer What is the name of the phenomenon that causes an accumulation of heat in the lower atmosphere because of the absorption of long wavelength radiation from the Earth's surface? Milling 素素 · 達 · 學

ANSWER: GREENHOUSE EFFECT

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14) EARTH SCIENCE Short Answer A meteor that reaches the surface of the Earth is more accurately called a:

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ANSWER: METEORITE

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- 15) LIFE SCIENCE Multiple Choice Which of the following is the region of the body where the thyroid gland is located:
 - W) neck

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Y.

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- X) abdomen
- Y) brain
- Z) arm pit

ANSWER: W) NECK

BONUS

15) LIFE SCIENCE Short Answer Encephalitis is an inflammation of what organ?

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ANSWER: BRAIN

TOSS-UP

16) GENERAL SCIENCE Short Answer Ring, Helix, Dumbbell and Veil are all names of what specific type of heavenly bodies?

ANSWER: NEBULA

BONUS

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16) GENERAL SCIENCE Short Answer Rounded to the nearest whole number, what is the Molitule At 18 18 Marithus Mark of 180 mountain the state of the state temperature in Fahrenheit of a substance at 100°C?

ANSWER: 212°

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17) EARTH SCIENCE Short Answer Which equinox marks the moment when fall begins in the Northern Hemisphere?

ANSWER: AUTUMNAL EQUINOX

BONUS

17) EARTH SCIENCE Multiple Choice Underwater volcanoes that have a flat top are called:

Matitude Mar 14 18 1980

- W) seamounts
- X) island arcs
- Y) abyssal mountains
- Z) guyots

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ANSWER: Z) GUYOTS

TOSS-UP

18) MATH Short Answer What is the smallest two-digit whole number?

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ANSWER: 10

BONUS

18) MATH Short Answer On your first math test you scored a 56% and on the second test you Militale Market 18 182 scored 70%. By what percentage did you increase your score?

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ANSWER: 25%

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(Solution = 70-56= 14, 14/56=25%)

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19) GENERAL SCIENCE Short Answer What term do physicists and engineers use most commonly to describe a change in the velocity of an object?

ANSWER: ACCELERATION

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19) GENERAL SCIENCE Multiple Choice Which list is out of order of closest to furthest distance from the sun:

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- W) Mercury, Venus, Earth
- X) Jupiter, Saturn, Neptune
- Y) Venus, Mars, Earth
- Z) Mercury, Jupiter, Pluto

ANSWER: Y) VENUS, MARS, EARTH

TOSS-UP

20) PHYSICAL SCIENCE Short Answer A color made from the addition of two primary Militally And At 18 18 colors is called a:

ANSWER: SECONDARY COLOR

BONUS

20) PHYSICAL SCIENCE Multiple Choice At 100 degrees Fahrenheit, which of the following substances would feel hottest to touch?

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- W) wood
- X) water
- Y) sand
- Z) gold

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ANSWER: Z) GOLD

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21) GENERAL SCIENCE Short Answer In a compound light microscope, the lens closest to the specimen is usually called the

ANSWER: OBJECTIVE

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BONUS

21) GENERAL SCIENCE Short Answer What is the nearest star to Earth in the Milky Way?

ANSWER: THE SUN

TOSS-UP

- 22) PHYSICAL SCIENCE Multiple Choice What property of waves allows them to bend Marithus 新春 茶 溪 % Milital Mark 18 18 around the edges of obstacle: Matitude Art 1/2 1/8
- W) reflection
- X) diffraction
 - Y) deflection
 - Z) dispersion

mytitute ## # 13 PR ANSWER: X) DIFFRACTION

BONUS

22) PHYSICAL SCIENCE Short Answer For a toaster that draws 12 amps on a 120 volt line, what is the resistance of the toaster?

ANSWER: 10 OHMS

(Solution: I = V/R, R = V/I, R = 120/12 = 10) Mytitute 赫赫·赫·豫 Mobilith And At 's 18. Mylitute Art At '8 PR Military Market 18 18

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- 23) LIFE SCIENCE Multiple Choice Which of the following is not a case of symbiosis:

 W) parasitism
 - W) parasitism

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- X) commensalism
- Y) mutualism

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ANSWER: Z) FORMATISM

BONUS

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23) LIFE SCIENCE Short Answer What is the name of the protein which is primarily responsible for the varying shades of color in human skin and increases in production after exposure to sunlight.

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ANSWER: MELANIN Maritute Start 13

TOSS-UP

24) EARTH SCIENCE *Short Answer* What is the name of a mixture of molten rock, suspended mineral grains, and dissolved gases that forms within the crust or mantle of the Earth when temperatures are sufficiently high:

ANSWER: MAGMA (DO NOT ACCEPT: LAVA)

(Solution: magma becomes lava when it erupts at the surface)

BONUS

24) EARTH SCIENCE Multiple Choice In what geological period did the first organisms with Military Market 18 180 Maritule ## # 18 18 Milita Mark is 182 shells first become abundant:

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- W) Precambrian
- X) Cambrian
- Y) Devonian
- Z) Permian

ANSWER: X) CAMBRIAN

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25) MATH Short Answer What is the standard formula for the surface area of a sphere?

ANSWER: Arr²

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ANSWER: $4\pi r^2$

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25) MATH Short Answer Multiply the following 5 numbers: (-2)(-5)(-4)(-3)(-1) Marith Mar Art '8 PR matitud # ** ** ** ** Matitude Mar At ' 18 PR motivite # 14 18

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Mylithin Mar At 13 198 ANSWER: -120 linkitute An

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