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NATIONAL DRUG LAW ENFORCEMENT AGENCY

(N.D.L.E.A)

RECRUITMENT EXAM

PAST QUESTIONS AND ANSWERS

(For up-coming exam preparation)

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THE N.D.L.E.A RECRUITMENT EXAM IS DIVIDED INTO THREE SECTIONS, WHICH ARE;

GENERAL STUDIES AND CURRENT AFFAIRS-----

ENGLISH LANGUAGE -----

GENERAL MATHEMATICS -----

GENERAL STUDIES AND CURRENT AFFAIRS PART:

1. One of this is not a method through which Drug Abuse Preventive Information are passed across by NDLEA.
 - (a) Lecture or talks such as seminars, workshops, public rallies.
 - (b) Use of Church and Mosque Campaigns.
 - (c) Use of the print media such as Newspapers, Magazines, poster etc.



(d) The use of electronic media such as jingles, drama, documentaries.

Answer is B

2. The NDLEA was established by the Decree Number 48 which was passed into law in what year?

(a) 1988

(b) 1989

(c) 1979

(d) 1978

Answer is B

3. The full meaning of the abbreviation NDLEA is?

(a) National Drug Law Enforcement Agency.

(b) Nigeria Drugs Law Enforcement Agency.

(c) National Drugs Law Enforcement Agency.

(d) Nigeria Drug Law Enforcement Agency.

Answer is A

4. The NDLEA is a agency found in Nigeria?

(a) An International Faith Based Agency.

(b) A Federal Government Agency.

(c) A National Agency.

(d) An International Drug Agency.

Answer is B



5. Which Nigeria President Signed the Bill for the creation of NDLEA into Law?

- (a) President Goodluck Jonathan.
- (b) General Muhammadu Buhari
- (c) President Olusegun Obasanjo.
- (d) General Ibrahim Babaginda.

Answer is D

6. Who was the first Chairman of the Nigeria Drug Law Enforcement Agency?

- (a) Muhammed Mustapha Abdallah.
- (b) Bello Lafiagi.
- (c) Ahmadu Giade.
- (d) Abba Kyari.

Answer is B

7. Who is the current Nigeria Drug Law Enforcement Agency Chairman?

- (a) Muhammed Mustapha Abdallah.
- (b) Bello Lafiagi.
- (c) Ahmadu Giade.
- (d) Abba Kyari.

Answer is A

8. The Core function of the NDLEA is———?

- (a) The Prosecution of Drug Dealers and Smokers of Cannabis.



- (b) The control of the borders to prevent the entering and exit of drugs and drug dealers.
- (c) The elimination of the growing, processing, manufacturing, selling, exporting, and trafficking of hard drugs.
- (d) The Conduct of Awareness campaigns against drugs and reporting of drug barons.

Answer is C

9. The most basic member of the family of hard drugs whose elimination is one of the founding objectives of the NDLEA is?

- (a) Marijuana.
- (b) Cigarettes.
- (c) Tramadol.
- (d) Cannabis.

Answer is D

10. The National Drug Law Enforcement Agency (NDLEA) is affiliated to which of these organizations?

- (a) United Nations Drug Cultivation Office on Drugs and Crime (UNODC).
- (b) The American Society of Drugs Elimination and Control (ASDEC).
- (c) The African Union Colony on Drugs and Crime (AUCDC).
- (d) The Worlds Anti Drug and Crime Campaign (WADCC).

Answer is A

11. The NDLEA as an entity has how many functional units?

- (a) 4.



- (b) 6.
- (c) 5.
- (d) 3.

Answer is B

12. One of these is not one of the six functional divisions of NDLEA?

- (a) Drug Demand Reduction.
- (b) Training, Research and Development.
- (c) Enforcement.
- (d) Investigation.

Answer is C

13. The Headquarters of the National Drug Law Enforcement Agency is located at?

- (a) Zaria, Kaduna.
- (b) Ikoyi, Lagos.
- (c) Gwagwalada, Abuja.
- (d) Orji, Enugu.

Answer is B

14. The most widely cultivated drug in Nigeria is?

- (a) Marijuana.
- (b) Coartem.
- (c) Cannabis.
- (d) Cocaine.



Answer is C

15. Which of these is component found in most drugs that makes it addictive?

- (a) Morphine.
- (b) Dopamine.
- (c) Ibuprofen.
- (d) Astermicine.

Answer is B

16. The following are strategic locations where members of the NDLEA are to be strategically located to counter drug trafficking except?

- (a) Seaports.
- (b) International Airports.
- (c) Big Churches and Mosques.
- (d) Border Crossing Areas.

Answer is C

17. The following are Ways by which NDLEA carries out the task of treatment and rehabilitation include of drug victims except?

- (a) Counselling.
- (b) Retribution Therapy.
- (c) Combination therapy.
- (d) Evaluation, Assessment/diagnosis.



Answer is B

18. The NDLEA according to the Decree 48 of 1989 has the power to do which of the following?
- (a) Monitor the private accounts of people suspected to have committed an offence under this Decree.
 - (b) Arrest and detain suspected drug offenders for as long as they will be charged to court.
 - (c) Prosecute a drug trafficker that has committed an offence under this Decree.
 - (d) Cause investigation to be conducted as to whether any person has committed an offense under this Decree.

Answer is D

19. Which of these days is set side and celebrated as International Day Against Drug Abuse and Illicit Trafficking?
- (a) June 12th of every year.
 - (b) June 26th of every year.
 - (c) June 31st of every year.
 - (d) June 1st of every year.

Answer is B

20. Which of the following is a brain child of the NDLEA that is made to tackle the menace of drugs especially among student?
- (a) Drug Free Club.
 - (b) Drug Free Class Rooms.
 - (c) Drug Free Sports.
 - (d) Drug Free Schools.



Answer is A

21. What are the most commonly abused drugs in the world?

- (a) Depressant.
- (b) Analgesics.
- (c) Surfactants.
- (d) Antibiotics.

Answer is A

22. Which of these zones in Nigeria is said to have the highest production of hard drugs by NDLEA?

- (a) South South.
- (b) North East.
- (c) North West.
- (d) South West.

Answer is D

23. The active component in marijuana that makes it a hard drug is ?

- (a) Tetraethyl amine.
- (b) Tetrahydrocannabinol.
- (c) bihydrophenicol.
- (d) Diamine Ethene.

Answer is B



24. Which of these is not a unit under the Drug Demand Reduction Directorate of NDLEA?

- (a) Drug Abuse Preventive Education.
- (b) Research and NGO Liaison.
- (c) Investigation and Linking.
- (d) Treatment and Rehabilitation.

Answer is C

25. What is the substance from which heroin is synthesized from?

- (a) Methane.
- (b) Ceramic.
- (c) Mesoprane.
- (d) Opium.

Answer is D

26. One of these is not one of the Goals of Drug Demand Reduction Directorate of NDLEA?

- (a) To de-emphasize the criminality of drug abuse.
- (b) To reduce the availability and overall demand for illicit drugs.
- (c) The promotion of the welfare of convicts.
- (d) To teach personal skills needed to avoid drug abuse.

Answer is C

27. Which category of drugs does Lysergic Acid Diethylamide (LSD)

- (a) Hallucinogen.
- (b) Laxative.



- (c) Analgesics.
- (d) Supplements.

Answer is A

28. One of these is not among the four major Treatment /rehabilitation methods in use in Nigeria?

- (a) Non-Governmental Based Treatment/Rehabilitation.
- (b) Cultural/Tribal Based Treatment/Rehabilitation.
- (c) Hospital based Treatment/Rehabilitation.
- (d) Religious/Faith Based Treatment/Rehabilitation.

Answer is B

29. Which among the following opiates is generally said or considered to be the most potent and strongest?

- (a) Paregoric.
- (b) Codeine.
- (c) Tobacco.
- (d) Morphine.

Answer is D

30. One of these is not an objective of the Drug Free Club?

- (a) Identifying and reporting students involved in drugs to school authorities not just for panel action but to be helped.
- (b) Promotion of activities that like sports and quiz that lead to drug involvement.



(c) Increasing the understanding of students about the effects and dangers of alcohol, tobacco and other drugs.

(d) Promotion of alternative activities to drug involvement.

Answer is B

31. Which of these is a domestic animal.

A. Cat

B. snake

C. Lion

D. Giraffe

Answer is A

32. We keep food in the _____ to prevent spoilage.

A. Shelve

B. cupboard

C. Fridge

D. Store

Answer is C

33. Scientists perform Experiments in the _____.

A. Library

B. Lavatory

C. Laboratory

D. Lobby

Answer is C



34. Which of these seasons of the year is not present in Nigeria?

- A. Harmattan
- B. Dry
- D. Raining
- D. Winter

Answer is D

35. Which of these options can be used to control plant growth around the house.

- A. Genocide
- B. herbicide
- C. Insecticide
- D. Kerosene

Answer is B

36. A pedestrian travel on _____.

- A. Water
- B. Bicycle
- C. Foot
- D. Train

Answer is C

37. The sun or any star and the planets which move round it is referred to as ____.

- A. Sunny system
- B. Solar System
- C. Solar Plexus
- D. Solar power



Answer is B

38. How many months of the year have less than 31 days?

- A. 1
- B. 3
- C. 5
- D. 7

Answer is C

39. The patient was taken to the _____ by the doctor for the surgery.

- A. Labor room
- B. Laboratory
- C. Theatre
- D. Ward

Answer is C

40. A female sheep is called

- A. Kid
- B. Fingerling
- C. Ewe
- D. Ram

Answer is C

41. Which of these options is the act of killing oneself deliberately.

- A. Poisoning
- B. Suicide



C. Homicide

D. Patricide

Answer is B

42. A distant object can appear closer if a _____ is used.

A. Microscope

B. Telescope

C. Stethoscope

D. Microphone

Answer is B

43. The examination takes place quarterly means the examination takes place

A. Once in four months

B. Once in three months

C. Only in four places

D. Only in three places

Answer is B

44. You can catch a glimpse of the queen means _____.

A. You can follow the queen

B. You can get a brief look at the queen

C. The glimpse belong to the queen

D. Queen can be seen always



Answer is B

45. Which of these describe the way of life of a group of people.

- A. Believe
- B. religion
- C. Culture
- D. Food

Answer is C

46. Which of these is not a type of religion.

- A. Buddhism
- B. Christianity
- C. Cannibalism
- D. Islam

Answer is C

47. The bony framework of an animal is its _____.

- A. Shape
- B. Skeleton
- C. Image
- D. Archeologist

Answer is B

48. Common salt is chemically called _____.

- A. Table Salt



- B. Sodium chloride
- C. food salt
- D. Sodium Carbonate

Answer is B

49. Iron can be prevented from rusting by _____.

- A. Adding water
- B. Painting
- C. Exposure to air
- D. Adding water and air

Answer is B

50. To be able to sing the anthem I must know the _____.

- A. Vocals
- B. Choir
- C. Lyrics
- D. Title

Answer is C

51. Which of these diseases is caused by tse-tse fly.

- A. Cholera
- B. Dysentery
- C. Sleeping sickness



D. Malaria

Answer is C

52. Which of these does not belong to the group?

A. Dog

B. Goat

C. Rat

D. Hen

Answer is D

53. The process of making beer is called_____.

A. Brewing

B. Browning

C. Bearing

D. Boring

Answer is A

54. Which of these is an example of body building food.

A. Yam

B. Egg

C. Coke

D. Butter

Answer is B



55. Which of these is a good source of vitamin c.

- A. Orange
- B. Beans
- C. Meat
- D. Butter

Answer is A

56. The period used by the fetus in the womb is called _____ period.

- A. Hibernation
- B. Gestation
- C. Acclimatization
- D. Growing

Answer is B

57. Which of the professional travels into space.

- A. Pilots
- B. Divers
- C. Astronaut
- D. Space wagon

Answer is C

58. The rainbow has _____ colors.



- A. 5
- B. 6
- C. 7
- D. 8

Answer is C

59. Which of these does not belong?

- A. Teacher
- B. Doctor
- C. student
- D. lawyer

Answer is C

60. Divide 22 by half and deduct 4. What do you have?

- A. 20
- B. 30
- C. 40
- D. 7

Answer is C

61. Tuned and Ade shared a certain sum of money. Tuned got #48 which was three times Ade's share. What was the amount shared?

- A. #62



B. #64

C. #144

D. #96

Answer is B

62. Great misfortune or disaster like thunderstorm which are not caused by man is called _____.

A. Death problem

B. Natural disaster

C. Industrial disaster

D. artificial disaster

Answer is B

63. If your father has two wives, the daughter of the other wife is your _____.

A. Sister

B. Half sister

C. Cousin

D. Step sister

Answer is B

64. Electricity does not flow through rubber because it is _____.

A. An insulator

B. A conductor

C. A condenser



D. A circuit

Answer is A

65. The excretory system in the body does the work of _____

A. Carrying blood

B. Removing food waste

C. Digesting food

D. Breathing

Answer is B

66. A ruler is 30cm long. How many times can it be used to measure a distance of 4.2m?

A. 10

B. 14

C. 140

D. 12

Answer is C

67. Which of the instrument is used to measure rainfall.

A. Rain meter

B. rain gauge

C. rain level

D. water rate

Answer is B



68. Butter and soap can be made from _____.

- A. Cocoa
- B. Cotton
- C. Palm oil
- D. Crude oil

Answer is C

69. Which of the following is not a voluntary organization?

- A. Boys scout
- B. Girls Guild
- C. Red Cross
- D. Road safety

Answer is D

70. A place where people keep their money and Valuables is called _____.

- A. Save
- B. Security house
- C. bank
- D. Treasury

Answer is C

71. The main implement used in mechanized farming is _____.

- A. Cutlass



B. Bull dozer

C. tractor

D. Hoe

Answer is C

72. Which of the following is a member of the nuclear family?

A. Grandmother

B. Aunt

C. Brother

D. Nephew

Answer is C

73. Which of these diseases is contagious?

A. Head ache

B. malaria

C. Cough

D. Stomach ache

Answer is C

74. For proper ventilation, a house must have _____ .

A. Toilets and bathrooms

B. Furniture and carpet

C. Windows and doors

D. Kitchen and store



Answer is C

75. Malaria is a disease transmitted by _____.

- A. Water
- B. Insect
- C. Air
- D. Food

Answer is B

76. Lizard, crocodile and snake are examples of _____ .

- A. Mammals
- B. Herbivores
- C. Amphibians
- D. Reptiles

Answer is D

77. The plate _____ by Ayo.

- A. Was breaking
- B. was broken
- C. is broken
- D. break

Answer is B



78. Nigeria is surrounded by _____ speaking countries.

- A. English
- B. French
- C. German
- D. Swahili

Answer is B

79. Bello's recent success got into his head. This means it made him _____ .

- A. Humble
- B. More careful
- C. Proud
- D. Happy

Answer is C

80. Bread is _____ in the oven

- A. Made
- B. Cooked
- C. Dough
- D. Baked

Answer is D

ENGLISH LANGUAGE PART:



Which of the following words can be formed from the words in capital.

1) FINGERPRINTING

- A. Finger
- B. Printings
- C. Fern
- D. Granite

Answer C

2) MADELEINE

- A. Deed
- B. Date
- C. Elder
- D. Line

Answer D

3) ENVANGELISM

- A. manager
- B. Glid
- C. Slim
- D. Ever

Answer C



4) DICTATION

- A. Icon
- B. Tate
- C. Ione
- D. Data

Answer A

5) ECONOMICS

- A. Economical
- B. Come
- C. Cooks
- D. Song

Answer B

Read the passage below and answer the questions that follows.

In law, trespass can be: the criminal act of going into somebody else's land or property without permission of the owner or lessee; it is also a civil law tort that may be a valid cause of action to seek judicial relief and possibly damages through a lawsuit. In some jurisdictions trespassing is an offence or misdemeanor covered by a criminal code. In other jurisdictions, it is not considered a crime or penal in nature, property is protected from trespass under civil law and privacy acts. In England and Wales, despite the prevalence of notices asserting that "trespassers will be prosecuted", unless the trespass is aggravated in some way, it will only be a civil wrong. Although criminal and civil trespass laws vary from jurisdiction to jurisdiction, most have the following facets in common: Property owners and their agents (for example, security guards) may only use reasonable force to protect their property. For example, setting booby traps on a



property to hurt trespassers or shooting at trespassers are usually strictly forbidden except in extreme circumstances. Not all persons seeking access to property are trespassers. The law recognizes the rights of persons given express permission to be on the property ("licensees") and persons who have a legal right to be on the property ("invitees") not to be treated as trespassers. For example, a meter reader on the property to read the meter is an invitee, as would be a travelling salesperson, or a police officer seeking to execute a warrant.

6) It is very difficult to successfully prosecute someone for trespass.

- A. True
- B. False
- C. Can't say

Answer : C

7) Property is only ever protected from trespass under civil law and privacy acts.

- A. True
- B. False
- C. Can't say

Answer :B

8) In Texas it is legal to use deadly force against trespassers after dark.

- A. True
- B. False
- C. Can't say

Answer : C



9) Invitees are people who have been specifically invited onto the property by the owner.

- A. True
- B. False
- C. Can't say

Answer : B

10) Aggravated trespass is a civil wrong and offenders cannot be prosecuted

- A. True
- B. False
- C. Can't say

Answer : B

Identify the relationship between the word pair in the question.

Select the answer where the word pair shown has the most similar relationship.

9) deplete : decrease

- A. shun : avoid
- B. overlook : find
- C. danger : evade
- D. like : detest

Answer : A

Explanation : Deplete and decrease are synonyms. Shun and avoid are synonyms.



10) anesthetic : numb

- A. vaccine : virus
- B. disease : drug
- C. sedative : drowsy
- D. action : lunacy

Answer: C

Explanation : An anesthetic makes something numb. A sedative makes something drowsy.

11) corrode : acid

- A. shoal : bird
- B. ocean : wave
- C. pack : cat
- D. pod : dolphin

Answer : D

Explanation: Heard is the collective noun for cows. Pod is the collective noun for dolphins.

12) evaporate : vapor

- A. centrifuge : gas
- B. petrify : stone
- C. saturate : fluid



D. corrode : acid

Answer : B

Explanation : Vapor may be the result of evaporation. Stone may be the result of petrification.

13) welt : blow

A. fall : height

B. strike : pain

C. stain : spill

D. throw : fly

Answer : C

Explanation : A welt is the result of a blow. A stain is the result of a spill.

14) paltry is to substantial as acute is to -----

A. angle

B. redundant

C. obtuse

D. sharp

Answer: C

Explanation : Paltry and substantial are opposites. Acute and obtuse are opposites.



15) chapter is to book as color is to -----

- A. hue
- B. artist
- C. palette
- D. spectrum

Answer : D

Explanation : A book is divided into chapters. A spectrum is divided into colors.

16) liability is to asset as expenditure is to -----

- A. income
- B. payments
- C. benefit
- D. costs

Answer : A

Explanation : Liability and asset are opposites. Expenditure and income are opposites.

17) sculptor is to marble as painter is to -----

- A. easel
- B. artist



C. canvas

D. brush

Answer : C

Explanation : A sculptor works with marble. A painter works with canvas.

18) hold is to hatch as room is to -----

A. ship

B. window

C. space

D. door

Answer : D

Explanation : A hatch is the entrance to a hold. A door is the entrance to a room.

Instruction: Identify the relationship between the word group in the question.

Select the answer which fits best with the group.

19) Nile, Amazon, Rhine

A. Baltic

B. Michigan

C. Danube

D. Victoria



Answer: C

Explanation: These are all rivers.

20) snake, lizard, tortoise

A. frog

B. crocodile

C. newt

D. toad

Answer : B

Explanation: These are all reptiles.

21) capricorn, aries, aquarius

A. gemini

B. zodiac

C. andromeda

D. astrology

Answer : B

Explanation: These are all signs of the zodiac.

22) ash, beech, elm



- A. pine
- B. Cactus
- C. ivy
- D. Oak

Answer : D

Explanation: These are all deciduous trees.

22) diamond, ruby, sapphire

- A. gold
- B. emerald
- C. platinum
- D. pearl

Answer : B

Explanation: These are all gemstones.

Identify the relationship between the word pair in the question.

Select the answer where the word pair shown has the most similar relationship.

23) submerge : dip

- A. avoid : evade
- B. dismiss : ban
- C. plead : ask
- D. crave : covet



Answer : C

Explanation: To submerge is the extreme of to dip. To plead is the extreme of to ask

24) bulky : streamlined

- A. cluttered : neat
- B. sleek : fast
- C. bloated : sink
- D. light : massive

Answer : A

Explanation: If something is bulky, it cannot be streamlined. If it is cluttered it cannot be neat.

25) rook : chess

- A. cricket : ball
- B. chip : poker
- C. football : goal
- D. swing : golf

Answer : B

Explanation: A rook is used in a game of chess. A chip is used in a game of poker.

26) satchel : bag

- A. foot : shoe



B. cup : mug

C. hand : glove

D. top : hat

Answer : D

Explanation : A satchel is a type of bag. A top hat is a type of hat.

27) cohesion : unity

A. belief : denial

B. dearth : scarcity

C. fear : unknown

D. death : famine

Answer : B

Explanation: Cohesion leads to unity. Dearth leads to scarcity.

28) Choose the word most nearly opposite in meaning to - heed

A. ignore

B. express

C. converse

D. attend

Answer : A



30) Choose the word most nearly opposite in meaning to - frustrate

- A. mollify
- B. pacify
- C. encourage
- D. irritate

Answer : C

31) Choose the word most nearly opposite in meaning to - abandon

- A. keep
- B. discover
- C. recover
- D. locate

Answer : A

32) Choose the word most nearly opposite in meaning to - mordant

- A. serene
- B. gentle
- C. penetrating
- D. acerbic

Answer : B

33) Choose the word most nearly opposite in meaning to - dissonance



- A. note
- B. conformist
- C. chord
- D. harmony

Answer : D

34) Choose the word most nearly opposite in meaning to - refute

- A. believe
- B. prove
- C. allow
- D. contradict

Answer : B

35) Choose the word most nearly opposite in meaning to - sedentary

- A. exciting
- B. inanimate
- C. wearisome
- D. active

Answer: D

36) Choose the word most nearly opposite in meaning to - compromise

A. confrontation

B. concession

C. indulgence

D. allowance

Answer : A

37) Choose the word most nearly opposite in meaning to - opulence

A. magnanimity

B. abstinence

C. moderation

D. poverty

Answer : D

38) Choose the word most nearly opposite in meaning to - deliberate

A. purposeful

B. conscious

C. accidental

D. intentional

Answer : C

39) Choose the word most similar in meaning to - mesmerize

- A. contradict
- B. fascinate
- C. attack
- D. confuse

Answer : B

40) Choose the word most similar in meaning to - quirky

- A. appreciation
- B. ungrateful
- C. interruption
- D. peculiar

Answer: C

41) Choose the word most similar in meaning to - exonerate

- A. deteriorate
- B. convey
- C. deliberate
- D. absolve

Answer : D

42) Choose the word most similar in meaning to - consecrate

- A. dedicate
- B. decay

C. appease

D. plead

Answer : A

43) Choose the word most similar in meaning to - lament

A. mourn

B. impulse

C. peril

D. fraud

Answer : A

44) Choose the word most similar in meaning to - manipulate

A. gerrymander

B. condescend

C. conciliate

D. deviate

Answer : A

45) Choose the word most similar in meaning to - abstruse

A. simple

B. unadorned

C. painful

D. perplexing

Answer: C

46) Choose the word most similar in meaning to - incorporeal

- A. unbiased
- B. insubstantial
- C. deceptive
- D. agricultural

Answer : B

47) Choose the word most similar in meaning to - undermine

- A. subvert
- B. demand
- C. depreciate
- D. dishearten

Answer : A

48) Choose the word most similar in meaning to - ignominious

- A. thorough
- B. senseless
- C. discomfiting
- D. vague

Answer : C

49) Which word means - to waste away; to wither

- A. atrophy
- B. shrink
- C. desiccate
- D. contract

Answer : A

50) Which word means - to understand; to figure out

- A. dissemble
- B. improvise
- C. Cosset
- D. fathom

Answer: B

MATHEMATICS PART:



1) A rectangle is twice as long as it is wide. If the width is a , what is the length of a diagonal?

A. $a\sqrt{2}$

Solution

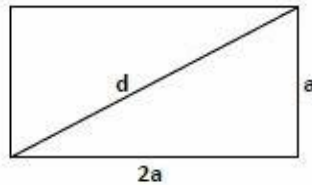
B. $a\sqrt{3}$

Draw a diagram and label it. Use the Pythagorean theorem to find d , the length of the diagonal: $a^2 + (2a)^2 = d^2 \Rightarrow a^2 + 4a^2 = d^2 \Rightarrow 5a^2 = d^2 \Rightarrow d = a\sqrt{5}$.

C. $a\sqrt{5}$

The answer is (C).

D. $3a$



E. $5a$

Answer is C

2) Last year Jose sold a painting for \$2000. If he made 25% profit on the sale, how much had he paid for the painting?

A. \$1200

C. \$1500

C. \$1600

D. \$2400

E. \$2500

Answer is C

Solution:

Jose made 25% profit, so if he bought the painting for x , he sold it for: $x + 0.25x = 1.25x = 2000 \Rightarrow x = 2000 \div 1.25 = 1600$.



3) In the figure below what is the value of b?

- A. 30
- B. 36
- C. 45
- D. 60
- E. 72

Answer is (B).

Solution:

Since vertical angles have the same measure, $c = d$, $d = a$, and $b = a - b$ $a = 2b$.
Therefore, $c = d = a = 2b$. Also, the sum of the measures of all six angles is 3600, so $a + b + c + d + a - b + d = 2a + c + 2d = 360$. Replacing c , d , and a by $2b$ yields $10b = 360 \Rightarrow b = 36$.

4) A lacrosse team raised some money. The members used 74% of the money to buy uniform, 18% for equipment, and the remaining \$216 for a team party. How much money did they raise?

- A. 2400
- B. 2450
- C. 2500
- D. 2600
- E. 2700

Answer is E



Solution:

SINCE $74\% + 18\% = 92\%$, THE \$216 spent on the party presents the other 8 % Of the money raised. Then: $0.08m = 216 \Rightarrow m = 216 \div 0.08 = 2700$.

5) In the figure below, what is the sum of the degree measures of all of the marked angles?

- A. 600
- B. 620
- C. 700
- D. 720
- E. 750

Answer is D

Each of the 10 marked angles is an exterior angle of the pentagon. If you take one angle at each vertex, the sum of the degree measures of those five angles is 360; the sum of the degree measures of the other five also is 360: $360 + 360 = 720$.

6) In the figure below, ABCD is a parallelogram. What is the value of $y - z$?

- A. 50
- B. 55
- C. 60
- D. 65

E. 70

Answer is A.

The sum of the degree measures of two consecutive angles of a parallelogram is 180, so $180 = (3x - 5) + (2x - 15) = 5x - 20 \Rightarrow 5x = 200 \Rightarrow x = 40$. Since opposite angles of a parallelogram are equal, $y = 3x - 5 = 115$ and $z = 2x - 15 = 65$. Then $y - z = 50$.

7) If the length of a rectangle is 4 times its width, and if its area is 144, what is its perimeter?

A. 6

B. 24

C. 30

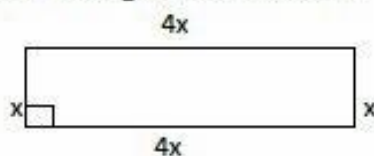
D. 60

E. 96

Answer is D.

Solution

Draw a diagram and label it.



Since the area is 144, then: $144 = 4x^2 \Rightarrow x^2 = 36 \Rightarrow x = 6$. The width is 6, the length is 24, the perimeter is 60. The answer is (D).



8) If the measures of the angles of a triangle are in the ratio of 1:2:3, and if the perimeter of the triangle is $30 + 10(3)^{1/2}$, what is the length of the smallest side?

- A. 20
- B. 18
- C. 15
- D. 12
- E. 10

Answer is E.

Solution

9) If the measures of the angles are in the ratio of 1:2:3, then, $x + 2x + 3x = 180 \Rightarrow 6x = 180 \Rightarrow x = 30$. The triangle is a 30-60-90 right triangle, and the sides are a , $2a$, and $a\sqrt{3}$. The perimeter therefore is $3a + a\sqrt{3} = a(3 + \sqrt{3})$, so $a(3 + \sqrt{3}) = 30 + 10\sqrt{3} = 10(3 + \sqrt{3}) \Rightarrow a = 10$. The answer is (10).

What is the area of Triangle ABC?

- A. 350
- B. 360
- C. 370
- D. 375
- E. 390

Answer is D.



The area of Triangle CDE = $0.5(8)(15) = 60$. Since the ratio of similitude for the two triangles (as calculated in solution C15) is 2.5, the area of Triangle ABC is $(2.5)^2$ times the area of CDE: $(2.5)^2 \times 60 = 6.25 \times 60 = 375$.

10) What is the perimeter of Triangle ABC?

- A. 80
- B. 85
- C. 95
- D. 100
- E. 105

Answer is D.

Solution

By the Pythagorean theorem, $8^2 + 15^2 = (CE)^2$ $(CE)^2 = 64 + 225 = 289$ $CE = 17$. Then the perimeter of CDE = $8 + 15 + 7 = 40$. Triangles ABC and CDE are similar (each has a 90° angle, and the vertical angle at C are congruent). The ratio of similitude is = 2.5, so the perimeter of ABC is $2.5 \times 40 = 100$.

11) If the difference between the measures of the two smaller angles of a right triangle is 20°, what is the measure, in degrees, of the smallest angle?

- A. 30
- B. 35



C 5

D. 50

Answer is B.

Solution

12)

of



What is the perimeter Triangle ABC

. Draw a diagram and label it. Write the equations, letting x = larger angle and Y = smaller angle:

$$x + y = 90$$

$$+ x - y = 20$$

$$\hline 2x = 110$$

. Add the equations:

Then $x = 55$, and $y = 90 - 55 = 35$. The answer is (35).

48

$48 + 12\sqrt{2}$

$48 + 12\sqrt{3}$

A.

B.

C.

D. 72

E. It cannot be determined from the information given

Answer is C.

Solution

Triangle ADB is a right angle triangle whose hypotenuse is 15 and one whose leg is 9, so this is a 3x-4x-5x triangle with $x = 3$, and $AD = 12$. Now ADC is a 30-60-90 triangle, whose shorter leg is 12. Hypotenuse AC is 24, and leg CD is $12\sqrt{3}$, so the perimeter is $24 + 15 + 9 + 12\sqrt{3} = 48 + 12\sqrt{3}$. The answer is C.



13) What is the area of Triangle BED in the figure below were ABCD is a triangle?

- A. 12
- B. 24
- C. 36
- D. 48
- E. 60

Answer is B.

You can calculate the area of the rectangle and subtract the area of the two white right triangles, but don't. The shaded area is a triangle whose base is 4 and whose height is 12. The area is $(4)(12) = 24$.

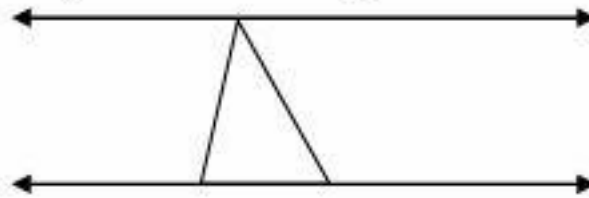
14) What is the value of PS in the triangle below?

- A. $5\sqrt{2}$
- B. 10
- C. 11
- D. 13
- E. $12\sqrt{2}$

Answer is D.

Use the Pythagorean Theorem twice, unless you recognize the common right triangle in the figure. Since $PR = 20$ and $QR = 16$, PQR is a $3x-4x-5x$ right triangle with $x = 4$. Then $PQ = 12$, and PQS is a right angle triangle whose legs are 5 and 12. The hypotenuse, PS , therefore is 13.

In the figure below, lines k and l are parallel. What is the value of $y - x$?



15)

- A. 40
- B. 45
- C. 50
- D. 55
- E. 57

Answer is B.

Solution

Since lines l and k are parallel, the angle marked y in the given diagram and the sum of the angles marked x and 45 are equal:



$$Y = x + 45 \quad y - x = 45.$$

16) In an office there was a small cash box. One day Ann took half of the money plus \$1 more. Then Dan took half of the money plus \$1 more. Stan then took the remaining \$11. How many dollars were originally in the box?

- A. \$50
- B. \$45
- C. \$42
- D. \$40
- E. \$38

Answer is A.

Solution

You can avoid some massy algebra by working backwards. Put back the \$11 Stan took; then put back the extra \$1 that Dan took. There is now \$12, which means that, when Dan took his half, he took \$12. Put that back. Now there is \$24 in the box. Put back the extra \$1 that Ann took. The box now has \$25, so before Ann took her half, there was \$50.

17) Each of the 10 players on the basketball team shot 100 free throws, and the average number of baskets made was 75. When the highest and lowest scores were eliminated the average number of baskets for the remaining 8 players was 79. What is the smallest number of baskets anyone could have made?



A. 22

B. 20



- C. 18
- D. 16
- E. 14

Answer is C.

Since the average of all 10 players was 75, the total number of baskets made was $10 \times 75 = 750$. Also, since 8 of the player had an average of 79, they made a total of $8 \times 79 = 632$ points. The other 2 players, therefore, made $750 - 632 = 118$ baskets. The most baskets that the player with the highest number could have made was 100, so the player with the lowest number had to have made at least 18.

18) Karen played a game several times. She received \$5 every time she won and had to pay \$2 every time she lost. If the ratio of the number of times she won to the number of times she lost was 3:2, and if she won a total of \$66, how many times did she play the game?

- A. 30
- B. 35
- C. 40
- D. 45
- E. 48

Answer is A.



Karen won $3x$ times and lost $2x$ times, and thus played a total of $5x$ games. Since she got \$5 every time she won, she received $\$5(3x) = \$15x$. Also, since she paid \$2 for each loss, she paid out $\$2(2x) = \$4x$. Therefore, her net winning were $\$15x - 4x = \$11x$, which you are told was \$66. Then, $11x = 66 \Rightarrow x = 6$, and so $5x = 30$.

19) Since 1950, when martin graduated from high school, he has gained 2 pounds every year. In 1980 he was 40% heavier than in 1950. What percent of his 1995 weight was his 1980 weight?

- A. 80
- B. 85
- C. 87.5
- D. 90
- E. 95

Answer is C.

Solution

Let x = Martin's weight in 1950. By 1980, he had gained 60 pounds (2 pounds per year for 30 years) and was 40% heavier:

$60 = 0.40x$ $x = 60 \div 0.4 = 150$. In 1980, he weighed 210 pounds, 15 years later, in 1995, he weighed 240:

$210/240 = 7/8 = 87.5\%$.

20) Henry drove 100 mile to visit a friend. If he had driven 8 mile per hour faster than he did, he would have arrived in of the time he actually toke. How many minute did the trip take?



- A. 100
- B 120
- C 144
- D 130
- E 150

Answer is E.

21)Two

Solution

Let t = time, in hours, and r = rate, in miles per hour, that Henry drove. Then: $t = \frac{100}{r}$ and $\frac{5}{6}t = \frac{100}{r+8}$. Multiply the second equation by $\frac{6}{5}$.

$$\frac{5}{5} \left[\frac{5}{6}t \right] = \frac{6}{5} \left[\frac{100}{r+8} \right] \Rightarrow t = \frac{600}{5r+40}, \text{ so Cross multiply: } 500r + 4000 = 600r \Rightarrow 100r =$$

$4000 \Rightarrow r = 40$.

Henry drove at 40 miles per hour, and the trip took $100 \div 40 = 2.5$ hours = **150 minutes**. (Had he driven at 48 miles per hour, the trip would have taken 125 minutes.). The answer is **E**.

printing presses working together can complete a job in 2.5 hours. Working alone, press A can do the job in 10 hours. How many hours will press B take to do the job by itself?

- A 3
- B 4
- C 5
- D 25/4



E 15/12

Answer is A.

Solution:

Multiply each term by $10x$: $2.5x + 25 = 10x$

.Subtract $2.4x$ from each other: $25 = 7.5x$

. Divide each side by 7.5 : $x = 3$ hours. The answer is A.

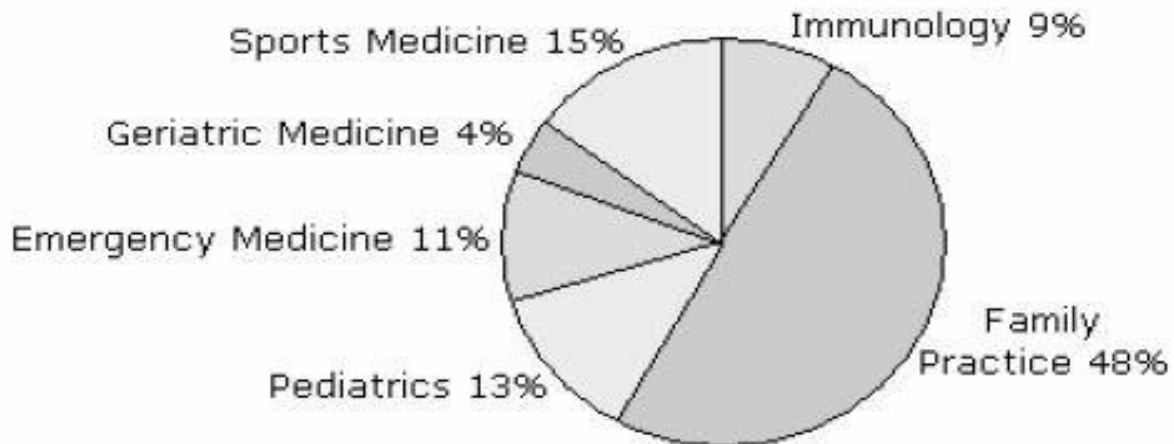
Solution

Let x = number of hours press B would take working alone.

	Press A Alone	Press B Alone	Together
Part of job that can be Completed in 1 hour	$\frac{1}{10}$	$\frac{1}{x}$	$\frac{1}{2.5}$
Part of the job can be Completed in 2.5 hours	$\frac{2.5}{10}$	$\frac{2.5}{x}$	1

- Write the equation: $\frac{2.5}{10} + \frac{2.5}{x} = 1$

North West Medical School Graduates 2005



The table above shows the specializations of North West Medical School graduates in 2005. Percentages have been rounded to the nearest whole number. One hundred and nineteen students graduated that year. Use this information to answer the following.

22) If seven students changed their specialization from family practice to pediatrics, approximately what fraction of students would then be specializing in pediatrics?

- A. $\frac{1}{7}$
- B. $\frac{1}{4}$
- C. $\frac{1}{7}$
- D. $\frac{1}{5}$
- E. $\frac{1}{15}$

Answer: D

Explanation: Thirteen percent of 119 students $(\frac{119}{100}) * 13 = 15$ specialized in pediatrics. If 7 students joined them then there would be 22 students studying it. This equates to $\frac{22}{119} = 0.18$ which is approximately $\frac{1}{5}$.



23) What is the approximate ratio of students specializing in sports medicine, emergency medicine and family practice?

- A. 6:4:10
- B. 1:4:5
- C. 2:8:10
- D. 3:2:10
- E. 3:2:5

Answer: D

Explanation: The ratio of students specializing in each is (15:11:48) which approximates to 3:2:10.

24) One twelfth of the students who chose to specialize in family practice plan to work abroad. How many is this?

- A. 7
- B. 8
- C. 5
- D. 9
- E. 3

Answer: C

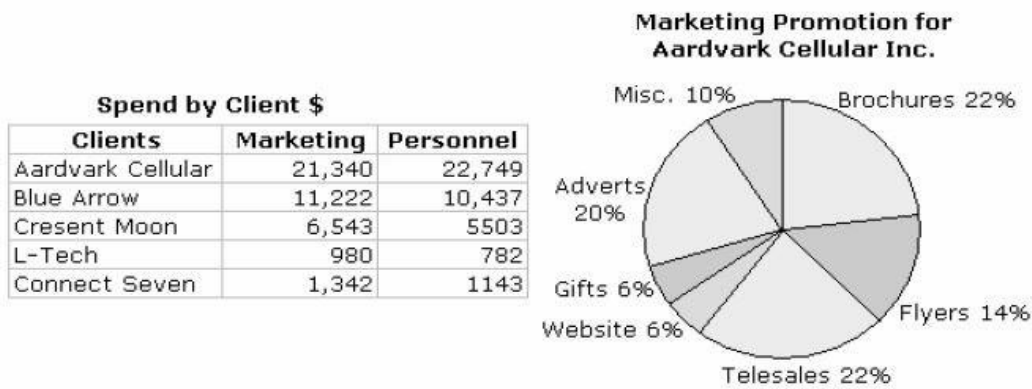
Explanation: Forty eight percent of 119 students $(119/100) * 48 = 57$ specialized in family practice. One twelfth of these equates to $57/12 = 5$ who planned to work abroad.

25) How many students decided to specialize in immunology?

- A. 9
- B. 11
- C. 14
- D. 7
- E. 15

Answer: B

Explanation: Nine percent of 119 students decided to specialize in immunology. This equates to $(119/100) * 9 = 11$ students



The table above shows the amount spent by Ace Marketing Consultancy to promote their clients. ‘Marketing’ spend does not include the time of any Ace employees, this is billed separately as ‘Personnel’. Use this information to answer the following questions.

- 26) Approximately what percentage of Ace Marketing’s total business is accounted for by their three smallest clients?
- A. 18%
 - B. 17%



- C. 20%
- D. 16%
- E. 22%

Answer: C

Explanation: The total value of Ace's business is \$41,427 (marketing) plus \$40,614 (personnel) which gives \$82,041. Since we know that Aardvark account for 54% of the business, the quickest way to work out how much the three smallest clients account for is to calculate how much Blue Arrow accounts for (\$21,659 which is 26%), add this to the

54% to give 80%, which leaves 20% to be accounted for by the smallest three.

27) Approximately what percentage of Ace Marketing's total business is for Aardvark Cellular?

- A. 49%
- B. 57%
- C. 50%
- D. 54%
- E. 56%

Answer: D

Explanation: The total value of Ace's business is \$41,427 (marketing) plus \$40,614 (personnel) which gives \$82,041. Aardvark Cellular account for $(21,340 + 22,749 =) \$44,089$. This equates to $(44,089 / 82,041) * 100 = 54\%$.

28) If flyers for Aardvark Cellular cost \$150 per thousand. Approximately, how many thousand have been produced?

- A. 23



- B. 20
- C. 17
- D. 14
- E. 18

Answer: B

Explanation: Fourteen percent of \$21,340 was spent on flyers for Aardvark Cellular. This equates to $(21340/100) * 14 = \$2,987$. If flyers cost \$150 per thousand then approximately $(2987/150 =)$ 20,000 have been produced.

29) If Ace charges their clients cost price plus 20%, how much will they bill Aardvark Cellular for their website?

- A. 1,5
- 36 B.
- \$1,174
- C. \$1,744
- D. \$1,280
- E. \$1,474

Answer: A

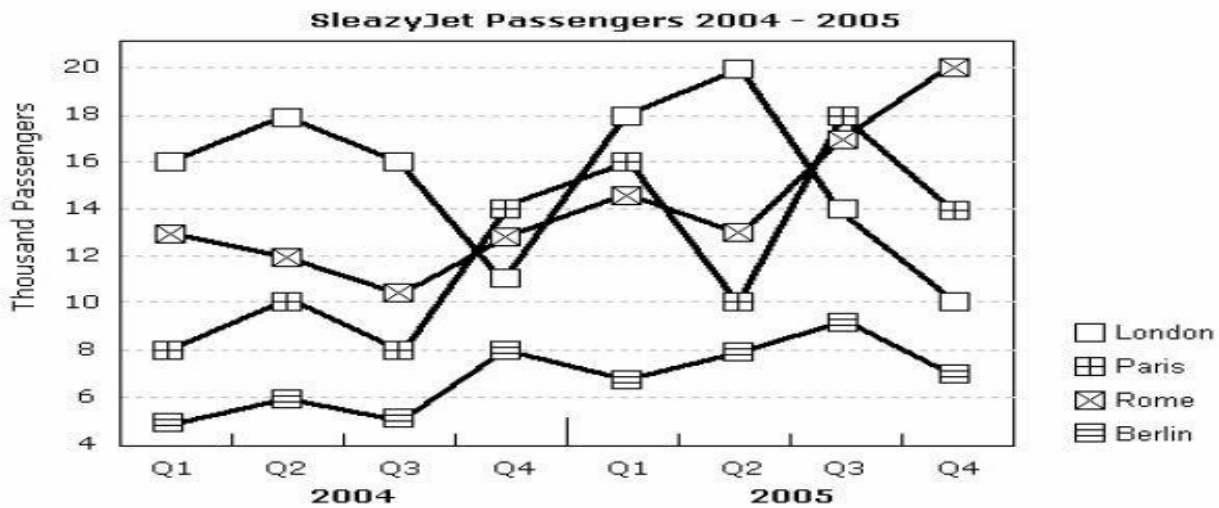
Explanation: Six percent of \$21,340 was spent on the website for Aardvark Cellular. This equates to $(21340/100) * 6 = \$1,280$. If Ace add 20% then they will bill Aardvark for $\$1,280 * 1.2 = \$1,536$.

30) Approximately how much was spent by on brochures for Aardvark Cellular?

- A. \$4,994
- B. \$4,774
- C. \$4,632
- D. \$4,694
- E. \$4,624

Answer: D

Explanation: Twenty two percent of \$21,340 was spent on brochures for Aardvark Cellular. This equates to $(21340/100) * 22 = \$4,694$.



The table above shows the numbers of passengers flying from New York to four European capital cities by low cost airline Sleazy Jet. These numbers have been rounded to the nearest thousand. Use this information to answer the following questions.

31) Approximately, what fraction of passengers who travelled in Q4 2005 flew to Berlin?

- A. 1/8
- B. 1/4
- C. 1/7



D. 1/5

E. 1/15

Answer: C

Explanation: The number of passengers travelling in Q4 2005 was:

London 10,000

Paris 14,000

Rome 20,000

Berlin 7,000

This gives a total of 51,000 of whom 7,000 were travelling to

Berlin. This equates to $(7,000/51,000 = 1/7)$.

32) How many more passengers travelled to Rome in Q2 2005 than in the same quarter the previous year?

A. 5,000

B. 4,000

C. 3,000

D. 2,000

E. 1,000

Answer: E

Explanation: The number of passengers travelling in to Rome Q2 2004 was 12,000.

The number of passengers travelling in to Rome Q2 2005 was 13,000.

Therefore 1,000 more passengers travelled in Q2 2005.



33) What was the ratio of passengers travelling to London and Paris in Q2 2004?

- A. 2.2:1
- B. 1.8:1
- C. 2:1
- D. 0.75:1
- E. 1:2

Answer: B

Explanation: The number of passengers travelling in to London Q2 2004 was 18,000. The number of passengers travelling in to Paris Q2 2004 was 10,000. This equates to a ratio of 1.8:1

34) How many passengers travelled in Quarter 4 2004?

- A. 46,000
- B. 44,000
- C. 43,000
- D. 45,000
- E. 42,000

Answer: A

Explanation: The number of passengers travelling in Q4 2004 was:

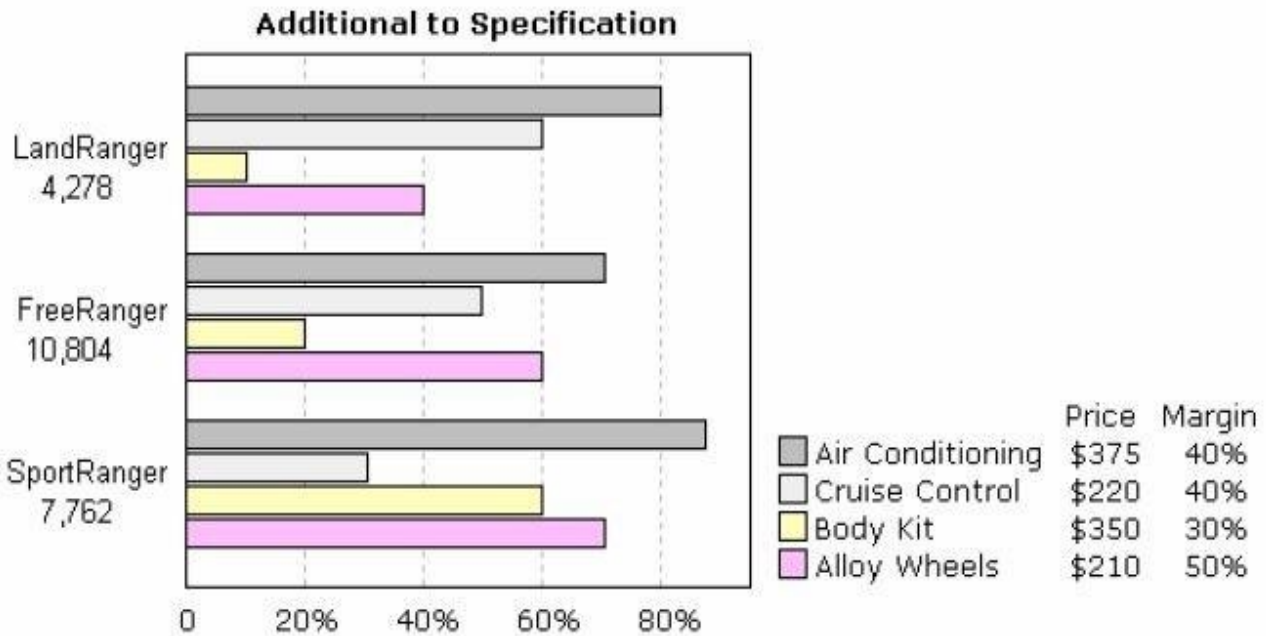
London 11,000

Paris 14,000

Rome 13,000

Berlin 8,000

This gives a total of 46,000.



The table above shows the total sales figures for three models of SUV. It also shows the percentage of customers who specified additional equipment when buying from the dealer network. Use this information to answer the following questions.

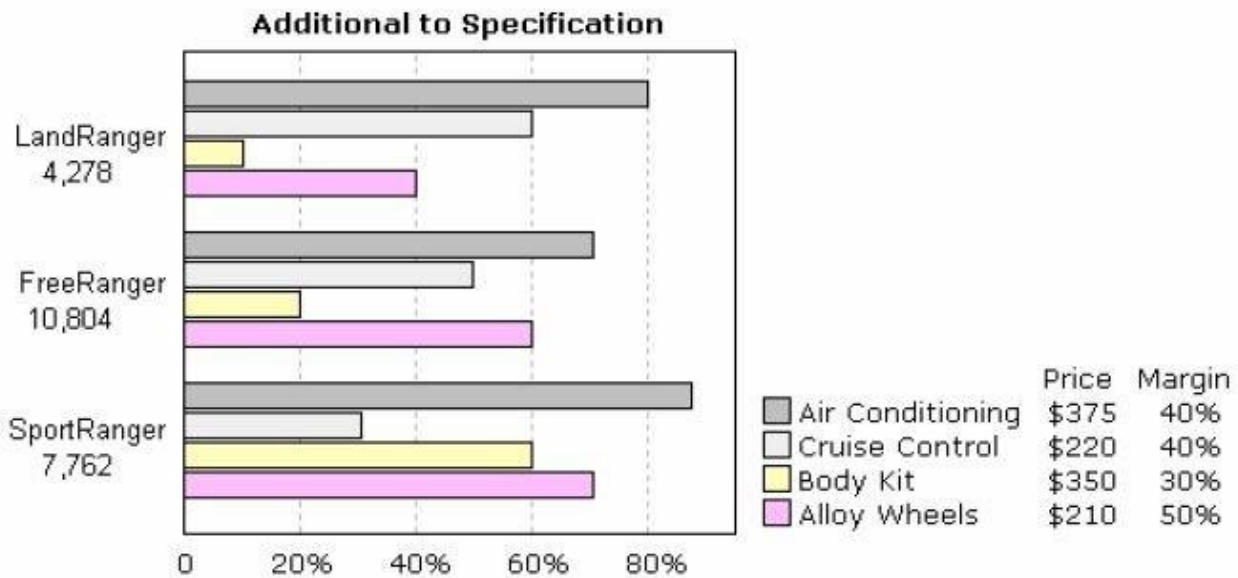
35) How much extra profit would be generated if dealers doubled the number of Body Kits fitted when they sold a Free Ranger?

- A. \$2,268
- B. \$4,534
- C. \$1,130
- D. \$1,238
- E. \$226

Answer: A

Explanation: Twenty percent of the 10,804 Free Rangers sold (2,161) were fitted with body kits. The total revenue generated was $2,161 * \$350 = \$756,000$. The profit margin on this is 30%, therefore

$(756,000/100) * 30 =) \$2,268$. If dealers doubled the number sold then the additional profit would be \$2,268.



The table above shows the total sales figures for three models of SUV. It also shows the percentage of customers who specified additional equipment when buying from the dealer network. Use this information to answer the following questions.

36) How much profit (margin), in millions of dollars, can be attributed to Cruise Control fitted to the Free Ranger?

- A. 0.61
- B. 0.48
- C. 0.21
- D. 4.80



E. 3.60

Answer: B

Explanation: Fifty percent of the 10,804 Free Ranger customers (5,402) specified cruise control. The total revenue generated was $5,402 * \$220 = \1.19 million. The profit margin on this is 40%, therefore $(1.19/100) * 40 =) \$0.48$ million.

37) How much profit (margin), in millions of dollars, can be attributed to Body Kits fitted to the Sport Ranger?

A. 0.49

B. 1.48

C. 4.80

D. 0.36

E. 0.21

Answer: A

Explanation: Sixty percent of the 7,762 Sport Rangers sold (4,657) were fitted with body kits. The total revenue generated was $4,657 * \$350 = \1.63 million. The profit margin on this is 30%, therefore $(1.63/100) * 30 =) \$0.49$ million

38)How much total revenue, in millions of dollars, did Alloy Wheels generate for Free Ranger sales?

A. 1.41

B. 1.28

C. 1.30

D. 1.36



E. 11.20

Answer: D

Explanation: Sixty percent of the 10,804 Free Rangers sold (6,482) were fitted with alloy wheels. Therefore the total revenue generated was $6,482 * \$210 = \1.36 million.

39) How many customers specified cruise control when ordering a Free Ranger?

A. 5,320

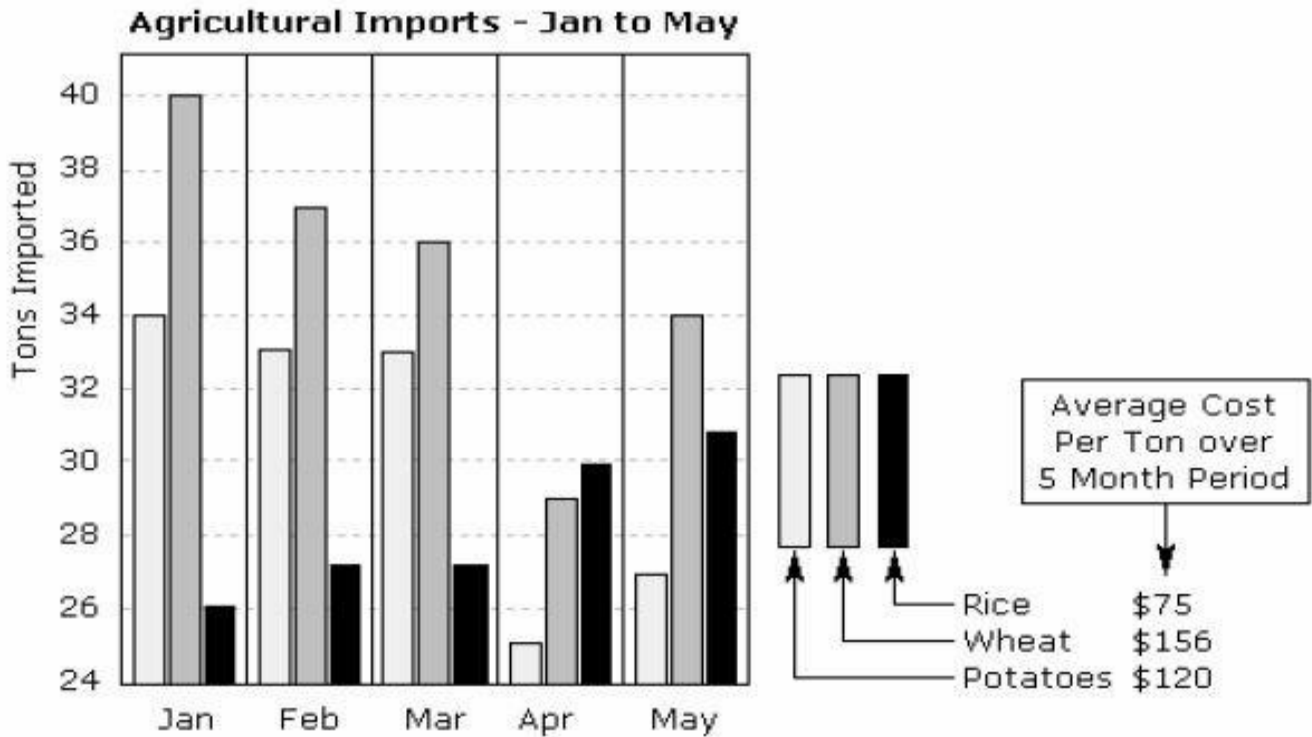
B. 2,566

C. 4,861

D. 2,861 E. 5,402

Answer: E

Explanation: Fifty percent of the 10,804 Free Ranger customers (5,402) specified cruise control.



The table above shows agricultural imports for the island of South Carney for a period of five months. Use this information to answer the following questions

40) Approximately what fraction of the total tonnage of imports is rice?

- A. 1/5
- B. 1/4
- C. 1/3
- D. 2/5
- E. 3/10

Answer: E

Explanation: Total tonnages imported over the 5 months are as follows:

Rice 141

Wheat 176



Potatoes 152

This means that the total tonnage of imports was 469 tons of which 141 tons were of rice. Therefore $(141/469 = 0.3)$ which is $3/10$.

41) Identify the missing number at the end of the series.

100, 96, 91, 85, ?

- A. 74
- B. 75
- C. 77
- D. 78
- E. 79

Answer: D

Explanation: The difference between the numbers in this series increases by 1 each time: -4, -5, -6, etc.

This will produce a difference of -7 between 85 and the next number in the series, which is therefore 78.

42) Identify the missing number at the end of the series.

11, 16, 26, 41, ?

- A. 51
- B. 56
- C. 61
- D. 66



E. 46

Answer: C

Explanation: The difference between the numbers in this series increases by 5 each time – 5, 10, 15, etc.

This will produce a difference of 25 between 41 and the next number in the series, which is therefore 66.

43) Identify the missing number at the end of the series.

5, 12, 19, 26, ?

A. 31

B. 33

C. 35

D. 34

E. 37

Answer: B

Explanation: The numbers in this series increase by 7 each time. Therefore the next number is 33.

44) Anna bought \$4,000 of company stock. She sold 75% of it when the value doubled, and the remainder at four times the purchase price. What was her total profit?

A. \$4,000

B. \$6,750

C. \$6,000

D. \$6,500

E. \$5,000



Answer: C

Explanation: Anna sold 75% of her stock when it was worth \$8000. So she took \$6000 cash, leaving her with \$2000 worth of stock, which she had purchased for \$1000. When this stock increased in value to \$4000 she sold it and added this to the first \$6000 giving her \$10,000 in cash. Subtracting the initial \$4000 cost of the stock, Anna has made \$6,000.

45) A total of 1600 copies of a CD were sold. 30% were sold at 55% discount, 10% were sold at 30% discount and the remainder were sold at the full price of \$7.95. What was the approximate total revenue in dollars?

- A. 10,369
- B. 10,569
- C. 10,569
- D. 10,234
- E. 10,669

Answer: D

Explanation: Of the 1600 CDs sold:

60% or 960 were sold at \$7.95 = \$7632

10% or 160 were sold at \$5.56 = \$889

30% or 480 were sold at \$3.57 = \$1713

Therefore the total revenue was \$10,234.

46) Anna and John both receive stock as part of their remuneration. Anna receives \$400 worth plus a bonus of 12%. John receives \$300 worth plus a bonus of 20%. What is the difference between the values of the two bonuses?



- A. \$12.00
- B. \$10.00
- C. \$20.00
- D. \$14.00
- E. \$11.50

Answer: A

Explanation: Anna receives a bonus of $(\$400 * 0.12 =)$ \$48. John receives a bonus of $(\$300 * 0.20 =)$ \$60. The difference between their bonuses is therefore \$12.

47) Components X, Y and Z are ordered in the ratio 1:5:4. How many Z components will be in an order for 8000 components?

- A. 3,200
- B. 1,600
- C. 6,400
- D. 4,600
- E. 1,800

Answer: A

Explanation: The components are ordered in the ratio 1:5:4 and the total order is for 8,000.

To work out the numbers of each add $1+5+4 = 10$.

Divide \$8,000 by $10 = 800$. You can then calculate that the number of Z components will be $(800 * 4 =)$ 3,200.



48) A bank offers 10% per annum interest which is calculated and added at the end of the year. Another bank offers 10% per annum which is calculated and added every six months. What is the difference on a deposit of \$800 after one year?

- A. \$2.00
- B. \$2.60
- C. \$2.40
- D. \$2.20
- E. \$4.00

Answer: A

Explanation: At the bank paying 10% interest calculated each year, the amount will be \$880 ($\$800 * 1.10$) at the end of the first year. At the bank paying 10% per annum added every 6 months, the amount will be \$840 ($\$800 * 1.05$) at the end of the first six months and \$882 ($\$840 * 1.05$) at the end of the year. Therefore the difference will be \$2.00.

49) It costs a manufacturer X dollars per component to make the first 500 components. All subsequent components cost $X \div 5$ each. When $X = \$4.50$ How much will it cost to manufacture 4,000 components?

- A. \$5,600
- B. \$4,600
- C. \$5,400
- D. \$5,200
- E. \$5,450

Answer: C



Explanation: The first 500 components are \$4.50 each which gives \$2,250. The 3500 subsequent components cost \$0.90 each which gives \$3,150. Therefore the run of 4000 components will cost \$5,400 50)

50. Identify the missing number.

2	6	44	8	10
15	19	?	21	23

- A. 72
- B. 66
- C. 73
- D. 57
- E. 55

Answer: D

Explanation: The numbers on the bottom row are 13 more than those on the top row. Therefore the missing number is $44 + 13 = 57$.