



JROTC Virtual Learning

LET 3 & 4/ ASVAB Practice Test 2

April 20, 2020



Lesson: April 20, 2020

Objective/Learning Target:

Students take the practice ASVAB pretests Paragraph Comprehension and Mathematics Knowledge in order to evaluate test results to better understand the test and the areas for more intense future study.

ASVAB Practice Test

- Today you will take the fourth and fifth subtests of the ASVAB (Paragraph Comprehension and Mathematics Knowledge)
- During the previous lessons we have learned how important practicing the ASVAB is for improving your score.
- You can print the answer sheets in this lesson or you can number your paper and write the answer letter next to the number.
- Check the time allowed in the instructions then keep track of your time. This is good practice for the actual test because time management is important for getting the most correct answers as possible.
- After you finish the two tests check your answers with those provided at the end of this lesson. Study each answer to better understand why it is correct.

PART 4: PARAGRAPH COMPREHENSION

Time: 13 Minutes—15 Questions

Directions: This test contains 15 items measuring your ability to obtain information from written passages. You will find one or more paragraphs of reading material followed by incomplete statements or questions. You are to read the paragraph(s) and select the lettered choice that best completes the statement or answers the question.

Here are two sample questions.

1. From a building designer's standpoint, three things that make a home livable are the needs of the client, the building site, and the amount of money the client has to spend. According to the passage, to make a home livable

(A) (B) (C) (D)

- A. the prospective piece of land makes little difference.
- B. it can be built on any piece of land.
- C. the design must fit the owner's income and site.
- D. the design must fit the designer's income.

The correct answer is that the designer must fit the owner's income and site, so choice C is the correct response.

2. In certain areas, water is so scarce that every attempt is made to conserve it. For instance, on one oasis in the Sahara Desert, the amount of water necessary for each date palm tree has been carefully determined.

(A) (B) (C) (D)

How much water is each tree given?

- A. No water at all
- B. Exactly the amount required
- C. Water only if it is healthy
- D. Water on alternate days

The correct answer is exactly the amount required, so choice B is the correct response. Your score on this test will be based on the number of questions you answer correctly. You should try to answer every question. Do not spend too much time on any one question.

When you begin, be sure to start with question number 1 in Part 4 in your test booklet and number 1 in Part 4 on your answer sheet.

1. Few drivers realize that steel is used to keep the road surface flat despite the weight of buses and trucks. Steel bars, deeply embedded in the concrete, are sinews to take the stresses so that the stresses cannot crack the slab or make it wavy.

The passage best supports the statement that a concrete road

- A. is expensive to build.
 - B. usually cracks under heavy weights.
 - C. looks like any other road.
 - D. is reinforced with other material.
2. Blood pressure, the force that the blood exerts against the walls of the vessels through which it flows, is commonly meant to be the pressure in the arteries. The pressure in the arteries varies with the contraction (work period) and the relaxation (rest period) of the heart. When the heart contracts, the blood in the arteries is at its greatest, or systolic, pressure. When the heart relaxes, the blood in the arteries is at its lowest, or diastolic, pressure. The difference between these pressures is called the *pulse pressure*.

According to the passage, which one of the following statements is most accurate?

- A. The blood in the arteries is at its greatest pressure during contraction.
- B. Systolic pressure measures the blood in the arteries when the heart is relaxed.
- C. The difference between systolic and diastolic pressure determines the blood pressure.
- D. Pulse pressure is the same as blood pressure.

3. More patents have been issued for inventions relating to transportation than for those in any other line of human activity. These inventions have resulted in a great financial savings to the people and have made possible a civilization that could not have existed without them.

One of the following statements that is best supported by the passage is that transportation

- A. would be impossible without inventions.
 - B. is an important factor in our civilization.
 - C. is still to be much improved.
 - D. is more important than any other activity.
4. The Supreme Court was established by Article 3 of the Constitution. Since 1869, it has been made up of nine members—the chief justice and eight associate justices—who are appointed for life. Supreme Court justices are named by the president and must be confirmed by the Senate.

The Supreme Court

- A. was established in 1869.
- B. consists of nine justices.
- C. consists of justices appointed by the Senate.
- D. changes with each presidential election.

5. With the exception of Earth, all of the planets in our solar system are named for gods and goddesses in Greek or Roman legends. This is because the other planets were believed to be in heaven like the gods and our planet lay beneath, like the earth.

All the planets EXCEPT Earth

- A. were part of Greek and Roman legends.
 - B. were believed to be in heaven.
 - C. are part of the same solar system.
 - D. were worshipped as gods.
6. Both the high school and the college should take the responsibility for preparing the student to get a job. Because the ability to write a good application letter is one of the first steps toward this goal, every teacher should be willing to do what he or she can to help the student learn to write such letters.

The paragraph best supports the statement that

- A. inability to write a good letter often reduces one's job prospects.
- B. the major responsibility of the school is to obtain jobs for its students.
- C. success is largely a matter of the kind of work the student applies for first.
- D. every teacher should teach a course in the writing of application letters.

7. Many people think that only older men who have a great deal of experience should hold public office. These people lose sight of an important fact. Many of the founding fathers of our country were comparatively young men. Today more than ever, our country needs young, idealistic politicians.

The best interpretation of what this author believes is that

- A. only experienced men should hold public office.
 - B. only idealistic men should hold public office.
 - C. younger men can and should take part in politics.
 - D. young people don't like politics.
8. The X-ray has gone into business. Developed primarily to aid in diagnosing human ills, the machine now works in packing plants, foundries, and service stations and in a dozen ways contributes to precision and accuracy in industry.

The X-ray

- A. was first developed to aid business.
- B. is being used to improve the functioning of industry.
- C. is more accurate in packing plants than in foundries.
- D. increases the output of such industries.

9. In large organizations, some standardized, simple, inexpensive method of giving employees information about company policies and rules, as well as specific instructions regarding their duties, is practically essential. This is the purpose of all office manuals of whatever type.

The paragraph best supports the statement that office manuals

- A. are all about the same.
 - B. should be simple enough for the average employee to understand.
 - C. are necessary to large organizations.
 - D. act as constant reminders to the employee of his or her duties.
10. In the relations of man to nature, the procuring of food and shelter is fundamental. With the migration of man to various climates, ever-new adjustments to the food supply and to the climate became necessary.

According to the passage, the means by which man supplies his material needs are

- A. accidental.
- B. inadequate.
- C. limited.
- D. varied.

11. Many experiments on the effects of alcohol consumption show that alcohol decreases alertness and efficiency. It decreases self-consciousness and at the same time increases confidence and feelings of ease and relaxation. It impairs attention and judgment. It destroys fear of consequences. Usual cautions are thrown to the winds. Drivers who use alcohol tend to disregard their usual safety practices. Their reaction time slows down; normally quick reactions are not possible for them. They cannot judge the speed of their car or any other car. They become highway menaces.

The above passage states that the drinking of alcohol makes drivers

- A. more alert.
 - B. less confident.
 - C. more efficient.
 - D. less attentive.
12. It is reasonable to assume that drivers may overcome the bad effects of drinking by
- A. relying on their good driving habits to a greater extent than normally.
 - B. waiting for the alcohol to wear off before driving.
 - C. watching the road more carefully.
 - D. being more cautious.

Questions 13–15 are based on the following passage.

Arsonists are persons who set fires deliberately. They don't look like criminals, but they cost the nation millions of dollars in property loss and sometimes loss of life. Arsonists set fires for many different reasons. Sometimes a shopkeeper sees no way out of losing his business and sets fire to it to collect the insurance. Another type of arsonist wants revenge and sets fire to the home or shop of someone he feels has treated him unfairly. Some arsonists just like the excitement of seeing the fire burn and watching the firefighters at work; arsonists of this type have even been known to help fight the fire.

13. According to the previous passage, an arsonist is a person who
- A. intentionally sets a fire.
 - B. enjoys watching fires.
 - C. wants revenge.
 - D. needs money.
14. Arsonists have been known to help fight fires because they
- A. felt guilty.
 - B. enjoyed the excitement.
 - C. wanted to earn money.
 - D. didn't want anyone hurt.
15. According to the previous passage, we may conclude that arsonists
- A. would make good firefighters.
 - B. are not criminals.
 - C. are mentally ill.
 - D. are not all alike.

STOP!
IF YOU FINISH BEFORE THE TIME IS UP,
YOU MAY CHECK OVER YOUR WORK ON THIS PART ONLY.

PART 5: MATHEMATICS KNOWLEDGE*Time: 24 Minutes—25 Questions*

Directions: This is a test of your ability to solve 25 general mathematical problems. You are to select the correct response from the choices given. Then mark the space on your answer sheet that has the same number and letter as your choice. Use scratch paper to do any figuring.

Now look at the two sample problems below.

1. If $x + 6 = 7$, then x is equal to

(A) (B) (C) (D)

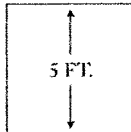
A. 0

B. 1

C. -1

D. $\frac{7}{6}$

The correct answer is 1, so choice B is the correct response.



2. What is the area of the square above?

(A) (B) (C) (D)

A. 1 square foot

B. 5 square feet

C. 10 square feet

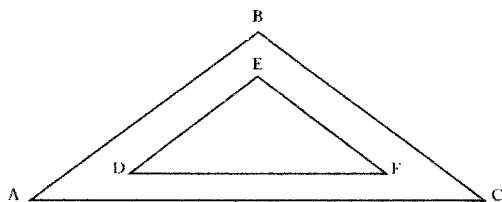
D. 25 square feet

The correct answer is 25 square feet, so choice D is the correct response.

Your score on this test will be based on the number of questions you answer correctly. You should try to answer every question. Do not spend too much time on any one question.

When you are told to begin, be sure to start with question number 1 in Part 5 in your test booklet and number 1 in Part 5 on your answer sheet.

1. A box contains 20 marbles. There are equal amounts of blue, green, red, and yellow ones. If one of the marbles is picked out at random, what is the probability that it will be yellow?
- A. $\frac{1}{2}$
 B. $\frac{1}{3}$
 C. $\frac{1}{4}$
 D. $\frac{1}{5}$



2. In the figure above, the sides of $\triangle ABC$ are respectively parallel to the sides of $\triangle DEF$. If the complement of A is 65° , then the measure of angle D is
- A. 25°
 B. 35°
 C. 55°
 D. 65°
3. The cube of 4 is
- A. 12
 B. 32
 C. 64
 D. 128
4. In the formula $I = prt$, what does I equal when $p = 500$, $r = 20\%$, $t = 2$?
- A. 10,000
 B. 700
 C. 8,000
 D. 12,000

5. $(x + 3)(x + 3) =$

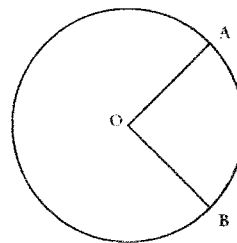
A. $x^2 + 9x + 6$
 B. $x^2 + 9x + 9$
 C. $x^2 + 6x + 6$
 D. $x^2 + 6x + 9$

6. $2.4 \times 104 =$

A. 9,600
 B. 2,400
 C. 24,000
 D. 240,000

7. $x^2 \times x^3 =$

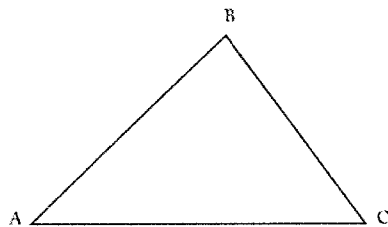
A. x^6
 B. x^5
 C. $2x^6$
 D. $2x^5$



8. In the figure above, $m\angle AOB = 60^\circ$. If O is the center of the circle, then minor arc AB is what part of the circumference of the circle?
- A. $\frac{1}{2}$
 B. $\frac{1}{3}$
 C. $\frac{1}{6}$
 D. $\frac{1}{8}$

9. In a bag there are red, green, black, and white marbles. If there are 6 red, 8 green, 4 black, and 12 white and one marble is to be selected at random, what is the probability it will be white?
- A. $\frac{1}{5}$
B. $\frac{2}{5}$
C. $\frac{4}{15}$
D. $\frac{2}{15}$
10. A man has T dollars to invest; after he invests \$1,000, how much money does he have remaining?
- A. $T + 1,000$
B. $T - 1,000$
C. $1,000 - T$
D. $1,000T$
11. A rectangular field is 900 yards by 240 yards. What is the greatest number of rectangular lots 120 yards by 60 yards that it can be divided into?
- A. 20
B. 60
C. 30
D. 40
12. The sum of the measures of the interior angles of a pentagon is
- A. 540°
B. 720°
C. 900°
D. $1,080^\circ$
13. If $\frac{3}{4}$ of a class is absent and $\frac{2}{3}$ of those present leave the room, what fraction of the original class remains in the room?
- A. $\frac{1}{24}$
B. $\frac{1}{4}$
C. $\frac{1}{12}$
D. $\frac{1}{8}$
14. If $a^2 + b^2 = c^2$, then $b =$
- A. $\sqrt{a - c}$
B. $\sqrt{c - a}$
C. $\sqrt{a^2 - c^2}$
D. $\sqrt{c^2 - a^2}$
15. If $a + b + 7 = 24$ and $a + b = c$, then $24 - c =$
- A. 0
B. 7
C. 14
D. 24
16. If $0.04y = 1$, then $y =$
- A. 0.025
B. 25
C. 0.25
D. 250
17. $\sqrt{45}$
- A. $5\sqrt{3}$
B. $9\sqrt{5}$
C. $9\sqrt{3}$
D. $3\sqrt{5}$

18. Triangle ABC is a(n)



- A. equilateral triangle.
 B. right triangle.
 C. scalene triangle.
 D. obtuse triangle.
19. From a temperature of 15° , a drop of 21° would result in a temperature of
 A. -36°
 B. 36°
 C. -6°
 D. -30°
20. A certain highway intersection has had A accidents over a ten-year period, resulting in B deaths. What is the yearly average death rate for the intersection?
 A. $A + B - 10$
 B. $\frac{B}{10}$
 C. $10 - \frac{A}{B}$
 D. $\frac{A}{10}$
21. A cube has a volume of 27 cubic inches. What is the surface area?
 A. 18 square inches
 B. 36 square inches
 C. 45 square inches
 D. 54 square inches
22. $(10^3)^2 =$
 A. 10^6
 B. 10^9
 C. 20^6
 D. 20^9
23. The sum of the measures of the interior angles of an octagon is
 A. 720°
 B. 900°
 C. $1,080^\circ$
 D. $1,260^\circ$
24. $8! = 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$. Therefore, $4! =$
 A. 44
 B. 32
 C. 42
 D. 24
25. If T tons of snow fall in 1 second, how many tons fall in M minutes?
 A. $60MT$
 B. $MT + 60$
 C. MT
 D. $\frac{60M}{T}$

STOP!
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YOU MAY CHECK OVER YOUR WORK ON THIS PART ONLY.

PART 4: PARAGRAPH COMPREHENSION

1. D	4. B	7. C	10. D	13. A
2. A	5. B	8. B	11. D	14. B
3. B	6. A	9. C	12. B	15. D

- The correct answer is D.** The first three options are not supported by the passage. The second sentence in the passage states that steel bars, deeply embedded in the concrete, are sinews (a source of strength) to take the stresses.
- The correct answer is A.** The third sentence in the passage states that when the heart contracts, the blood in the arteries is at its greatest pressure.
- The correct answer is B.** The second sentence states that inventions relating to transportation have made possible a civilization that could not have existed without them. This supports the correct answer—transportation is an important factor in our civilization.
- The correct answer is B.** One chief justice plus eight associate justices equals nine justices.
- The correct answer is B.** The second sentence states that the other planets were believed to be in heaven.
- The correct answer is A.** Step one in the job application process is often the application letter. If the letter is not effective, the applicant will not move on to the next step, and job prospects will be greatly lessened.
- The correct answer is C.** The last sentence states that the country needs young, idealistic politicians.
- The correct answer is B.** The passage states that the X-ray machine “contributes to precision and accuracy in industry.”
- The correct answer is C.** The passage states that office manuals are a necessity in large organizations.
- The correct answer is D.** The first three options are not supported by the passage. The correct answer is supported by the second sentence, which states, “With the migration of man to various climates, ever-new adjustments to the food supply and to the climate became necessary.”
- The correct answer is D.** The first three options are not supported by the passage. The third sentence in the passage states that the drinking of alcohol impairs attention—making the driver less attentive.
- The correct answer is B.** Drinking alcohol causes harmful effects on the driver. The implication is that these effects do not last forever but wear off in time.
- The correct answer is A.** The first sentence in the passage states that arsonists set fires deliberately or intentionally.

14. **The correct answer is B.** The last sentence in the passage states that some arsonists just like the excitement of seeing the fire burn and watching the firefighters at work and even helping fight the fire.

15. **The correct answer is D.** The first three options are not supported by the passage. Different types of arsonists mentioned in the passage leads to the conclusion that arsonists are not all alike.

Items Answered Incorrectly: _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____

Items Unsure Of: _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____

Total Number Answered Correctly: _____

PART 5: MATHEMATICS KNOWLEDGE

1. C	6. C	11. C	16. B	21. D
2. A	7. B	12. A	17. D	22. A
3. C	8. C	13. C	18. C	23. C
4. B	9. B	14. D	19. C	24. D
5. D	10. B	15. B	20. B	25. A

- The correct answer is C.** If there are equal amounts of each color, there would be 5 blue, 5 green, 5 red, and 5 yellow for a total of 20 marbles. The chance of drawing out a yellow would be $\frac{5}{20}$ or $\frac{1}{4}$.
- The correct answer is A.** Angles that are complementary add up to 90° . If the complement of angle A is 65° , then angle A is 25° . Since angle A and angle D are corresponding angles in similar triangles, then angle D is also 25° .
- The correct answer is C.** $4 \times 4 \times 4 = 64$
- The correct answer is B.**
 $I = 500, (500 \times 0.20 \times 2)$
 $I = 500, 200$
 $I = 700$
- The correct answer is D.** $(x + 3)(x + 3) =$

$$\begin{array}{r} x + 3 \\ \times x + 3 \\ \hline x^2 + 3x \\ + 3x + 9 \\ \hline x^2 + 6x + 9 \end{array}$$
- The correct answer is C.** $2.4 \times 104 = 2.4 \times 10,000 = 24,000$
- The correct answer is B.** The product of two powers with the same base can be calculated by keeping the base and adding the exponents.
- The correct answer is C.** A circle is 360° ; 60° is $\frac{1}{6}$ of 360° .
- The correct answer is B.** There are $6 + 8 + 4 + 12 = 30$ marbles. $12 \div 30 = 0.40 = \frac{2}{5}$
- The correct answer is B.** If the man uses \$1,000 of his T dollars, he has $T - \$1,000$ remaining.
- The correct answer is C.** The field is $900 \text{ yds.} \times 240 \text{ yds.} = 216,000 \text{ sq. yds.}$
Each lot is $120 \text{ yds.} \times 60 \text{ yds.} = 7,200 \text{ sq. yds.}$
 $216,000 \div 7,200 = 30$ lots
- The correct answer is A.** The formula for the sum of the measures of the interior angles of any polygon is $180(n - 2)$, where $n =$ number of sides of the figure. Since a pentagon has 5 sides, $180(5 - 2) = 540^\circ$.
- The correct answer is C.** If $\frac{3}{4}$ are absent, $\frac{1}{4}$ are present. If $\frac{2}{3}$ of the $\frac{1}{4}$ present leave, $\frac{1}{3}$ of the $\frac{1}{4}$ remain. $\frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$ remain in the room.
- The correct answer is D.** In $a^2 + b^2 = c^2$, solving for b would mean subtracting a^2 from both sides leaving $b^2 = c^2 - a^2$. To solve for b , taking the square root of each side would yield $b = \sqrt{c^2 - a^2}$.

15. **The correct answer is B.** In equation $a + b + 7 = 24$, subtract 7 from both sides. That leaves $a + b = 17$. So, if $a + b = c$, then by transitive property $c = 17$. Then, $24 - (17) = 7$.
16. **The correct answer is B.**
 $.04y = 1$
 $y = 1 \div .04 = 25$
17. **The correct answer is D.** The goal of simplifying expressions with square roots is to factor the radicand (45) into a form that has no square factors. We can take out the square root of 9 in this case.
 $\sqrt{45} = \sqrt{9 \cdot 5} = 3\sqrt{5}$
18. **The correct answer is C.** A triangle with no side of the same length is called scalene.
19. **The correct answer is C.** $15^\circ - 21^\circ = -6^\circ$
20. **The correct answer is B.** The number of accidents is irrelevant to the question, so A has no place in the equation. B (total deaths) \div 10 years = $\frac{B}{10}$ average deaths per year.
21. **The correct answer is D.** The cube has 3 edges 3 inches long. Area of one side = $3 \times 3 = 9$ square inches. There are six sides to a cube. $9 \times 6 = 54$ square inches.
22. **The correct answer is A.** $(10^3)^2 = (10^3)(10^3) = 10^6$
23. **The correct answer is C.** The sum of the interior angles of any polygon can be found using the formula $(n-2) * 180$ (insert degree symbol) where n is equal to the number of sides in the polygon. Since an octagon has 8 sides, substitute this value for n and calculate: $(8-2) * 180 = 6 * 180 = 1,080$ degrees.
24. **The correct answer is D.** $4!$ (read "four factorial") = $4 \times 3 \times 2 \times 1 = 24$
25. **The correct answer is A.** To find how many tons fall in a given number of minutes, multiply the number of tons that fall in 1 minute by the number of minutes. There are 60 seconds in 1 minute, and T tons fall in 1 second. In M minutes, the amount of snow that falls is $60MT$.

Items Answered **Incorrectly**: _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____

Items Unsure Of: _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____ ; _____

Total Number Answered Correctly: _____