

ASVAB Practice Test PDF with Answers

30 practice questions across all 9 ASVAB subtests. Choose the best answer for each question, then check the answer key and explanations at the end.

Suggested time: 36 minutes

1. Which organ is primarily responsible for filtering waste products from the blood and producing urine?

- A. Liver
- B. Kidney
- C. Pancreas
- D. Spleen

2. Water (H₂O) is best classified as which of the following?

- A. An element
- B. A compound
- C. A mixture
- D. An isotope

3. Which layer of Earth's atmosphere contains the ozone layer that absorbs most of the sun's ultraviolet radiation?

- A. Troposphere
- B. Mesosphere
- C. Stratosphere
- D. Thermosphere

4. A car travels at 55 miles per hour. How many miles will it travel in 3 hours and 30 minutes?

- A. 165 miles
- B. 182.5 miles
- C. 192.5 miles
- D. 198 miles

5. A store marks up an item by 40% from its wholesale cost of \$35. What is the retail selling price?

- A. \$14.00
- B. \$45.50
- C. \$49.00
- D. \$52.50

6. A recipe calls for flour and sugar in a ratio of 5:2. If you use 20 cups of flour, how many cups of sugar are needed?

- A. 4 cups
- B. 6 cups
- C. 8 cups
- D. 10 cups

7. A soldier earns \$2,400 per month and saves 15% of that amount. After 6 months, how much has the soldier saved?

- A. \$1,440
- B. \$2,160
- C. \$2,400
- D. \$3,600

8. ARID most nearly means:

- A. Damp
- B. Stormy
- C. Dry
- D. Fertile

9. PRUDENT most nearly means:

- A. Reckless
- B. Cautious
- C. Generous
- D. Stubborn

10. CONCISE most nearly means:

- A. Wordy
- B. Unclear
- C. Brief
- D. Detailed

11. OMINOUS most nearly means:

- A. Cheerful
- B. Threatening
- C. Ordinary
- D. Surprising

12. Read the following passage and answer the question."Solar panels convert sunlight directly into electricity using photovoltaic cells. Unlike fossil fuels, solar energy produces no emissions during operation, making it one of the cleanest energy sources available."What is the main idea of this passage?

- A. Fossil fuels are harmful to the environment.
- B. Solar panels require no maintenance.
- C. Solar energy is a clean electricity source that uses photovoltaic cells.
- D. Photovoltaic cells are expensive to manufacture.

13. Read the following passage and answer the question."The base commander issued new physical fitness standards requiring all personnel to complete a 2-mile run in under 18 minutes. Soldiers who fail to meet the standard will be enrolled in a remedial training program."What can be inferred about soldiers who complete the run in exactly 18 minutes?

- A. They will receive an award.
- B. They will be enrolled in remedial training.
- C. They have exceeded the standard.
- D. They will be exempt from future tests.

14. Read the following passage and answer the question."Dehydration impairs both physical and cognitive performance. Even a 2% loss of body water can reduce a person's ability to concentrate and make decisions. Military personnel operating in hot climates must monitor fluid intake closely."According to the passage, what effect does mild dehydration have?

- A. It causes permanent cognitive damage.
- B. It has no effect below 5% fluid loss.
- C. It reduces the ability to concentrate and make decisions.
- D. It only affects physical performance, not mental performance.

15. A rectangular room measures 14 feet long and 9 feet wide. What is the area of the room?

- A. 46 square feet
- B. 92 square feet
- C. 126 square feet
- D. 132 square feet

16. Solve for x: $3x - 7 = 14$

- A. $x = 3$
- B. $x = 5$
- C. $x = 7$
- D. $x = 9$

17. What is the value of 2^5 ?

- A. 10
- B. 16
- C. 25
- D. 32

18. What is $^3\sqrt{4}$ divided by $^3\sqrt{8}$?

- A. $\frac{1}{2}$
- B. 1
- C. 2
- D. $\frac{9}{32}$

19. A circuit has a voltage of 12 volts and a resistance of 4 ohms. According to Ohm's Law, what is the current flowing through the circuit?

- A. 0.33 amperes
- B. 3 amperes
- C. 8 amperes
- D. 48 amperes

20. In a series circuit with three light bulbs, one bulb burns out. What happens to the other two bulbs?

- A. They burn brighter.
- B. They continue operating normally.
- C. They also go out.
- D. They flicker but stay on.

21. What unit is used to measure electrical resistance?

- A. Volt
- B. Ampere
- C. Watt
- D. Ohm

22. Which tool is best suited for tightening a bolt that is in a recessed or hard-to-reach location?

- A. Open-end wrench
- B. Socket wrench with extension
- C. Adjustable pliers
- D. Torque screwdriver

23. What is the primary function of a vehicle's radiator?

- A. Filter engine oil
- B. Regulate fuel mixture
- C. Dissipate heat from the engine coolant
- D. Reduce exhaust emissions

24. Before operating a power saw in a shop, you should FIRST:

- A. Test the blade on scrap wood
- B. Put on appropriate eye protection
- C. Plug in the saw and let it warm up
- D. Check the sharpness of the blade by touch

25. A 10-pound weight is placed 6 feet from the fulcrum of a lever. To balance it, how far from the fulcrum must a 15-pound weight be placed on the opposite side?

- A. 2 feet
- B. 4 feet
- C. 6 feet
- D. 9 feet

26. If a small gear with 10 teeth meshes with a large gear with 40 teeth, and the small gear rotates at 200 RPM, how fast does the large gear rotate?

- A. 25 RPM
- B. 50 RPM
- C. 100 RPM
- D. 800 RPM

27. A 200-pound crate is resting on a flat surface. If you push it horizontally with a force of 50 pounds and it does not move, what is the force of friction acting on the crate?

- A. 0 pounds
- B. 50 pounds
- C. 150 pounds
- D. 200 pounds

28. A flat piece of material is cut into four identical right triangles, each with legs of equal length. If all four triangles are arranged so their right-angle corners meet at a center point, what shape do they form?

- A. A circle
- B. A rectangle
- C. A square
- D. A hexagon

29. A rectangular piece of paper is folded in half along its longest axis, then folded in half again along the same axis. When unfolded, how many equal sections does the paper have?

- A. 2
- B. 3
- C. 4
- D. 6

30. A cube is painted red on all six faces and then cut into 27 equal smaller cubes (a 3 x 3 x 3 grid). How many of the small cubes have paint on exactly two faces?

- A. 6
- B. 8
- C. 12
- D. 24

Answer Key and Explanations

1. B. Kidney

The kidneys filter nitrogen-rich waste and excess water from the blood and excrete them as urine. Each kidney contains roughly a million nephrons that do this filtering work. The liver also processes blood, but its job is detoxifying chemicals, breaking down old red cells, and metabolizing nutrients into bile and proteins, not making urine. The pancreas produces digestive enzymes and the hormone insulin. The spleen filters old red blood cells and stores immune cells but does not produce urine. Urine production is the kidney's defining function.

2. B. A compound

A compound is two or more different elements chemically bonded in a fixed ratio, which is exactly what H₂O is: hydrogen and oxygen locked at 2 to 1 by covalent bonds. An element contains only one kind of atom, so water cannot qualify because it holds two. A mixture is a physical blend whose components keep their own identities and can be separated by physical means, like salt water or air, but the H and O in water cannot be separated that way. An isotope describes versions of one element with different neutron counts, not a multi-element substance.

3. C. Stratosphere

The stratosphere sits roughly 10 to 50 kilometers above the surface, and within it the ozone layer absorbs most incoming UV radiation. The troposphere is the bottom layer where weather happens and airliners cruise; it lacks the ozone concentration. The mesosphere is above the stratosphere and is where meteors burn up. The thermosphere is higher still and hosts auroras and the International Space Station, but it does not hold ozone. Pairing ozone with the wrong neighboring layer (mesosphere or troposphere) is the typical slip.

4. C. 192.5 miles

3 hours 30 minutes = 3.5 hours. Distance = $55 \times 3.5 = 192.5$ miles.

5. C. \$49.00

Markup = $40\% \times \$35 = \14 . Retail price = $\$35 + \$14 = \$49.00$.

6. C. 8 cups

Set sugar/flour = $\frac{2}{5}$, so sugar = $(\frac{2}{5}) \times 20 = 8$ cups. Choice 4 cups uses the difference between ratio parts ($5 - 2 = 3$) and applies it loosely, then halves the answer. Choice 6 cups assumes the ratio means 2 cups of sugar for every 6 of flour, misreading the colon as a one-step gap rather than a multiplicative ratio. Choice 10 cups halves the 20 cups of flour, ignoring the 5:2 relationship and treating the ratio as if it were 2:1.

7. B. \$2,160

Monthly savings = $15\% \times \$2,400 = \360 . Over 6 months: $\$360 \times 6 = \$2,160$.

8. C. Dry

Arid means extremely dry, with little or no rainfall, as in 'the arid desert of southern Arizona received only four inches of rain last year.' Damp is the direct antonym, naming wetness rather than dryness. Stormy is a sound-association trap, drawing on the weather frame but referring to active turbulent weather, not the absence of moisture. Fertile is a secondary antonym, since arid land is typically infertile, but fertility is about productivity, not water content directly. Only Dry captures the core meaning of arid.

9. B. Cautious

Prudent means showing careful thought and good judgment about future consequences, as in 'it was prudent to refuel before crossing the desert.' Reckless is the direct antonym, naming heedless risk-taking. Generous overlaps with prudence as a positive trait but describes giving freely, a separate virtue. Stubborn is a register trap: a prudent person holds firm on careful reasoning, but stubbornness refuses to budge regardless of reasoning. Cautious is the dominant synonym, sharing both the forward-looking concern and the avoidance of risk.

10. C. Brief

Concise means expressing information in a small number of well-chosen words, as in 'her concise summary fit on one index card.' Wordy is the direct antonym, naming excess language. Unclear is a register trap, since concise writing is often very clear, not muddled. Detailed is a partial-overlap trap: a concise message can include essentials, but detailed implies thoroughness and length, the opposite of concise compression. Brief is the dominant synonym, sharing the core idea of short and to the point.

11. B. Threatening

Ominous means giving the impression that something bad is about to happen, as in 'the ominous clouds rolling in promised a violent storm.' Cheerful is the direct antonym, naming brightness rather than dread. Ordinary is a register trap, since ominous signals warn of the unusual and dangerous, not the routine. Surprising is a partial-overlap trap: an ominous event may startle, but the defining quality is foreboding menace, not novelty. Threatening is the dominant synonym, sharing the sense of impending harm.

12. C. Solar energy is a clean electricity source that uses photovoltaic cells.

Both sentences work together to make one point. The first defines how solar panels operate ("convert sunlight directly into electricity using photovoltaic cells"), and the second adds the clean-energy claim ("no emissions during operation, making it one of the cleanest energy sources available"). Choice C captures both halves. Choice A treats the brief mention of fossil fuels as the topic when fossil fuels appear only as a comparison point. Choice B invents maintenance, which the passage never discusses. Choice D introduces cost, which is also absent. Both wrong-direction choices add information the text does not provide.

13. B. They will be enrolled in remedial training.

The standard is "under 18 minutes," and "soldiers who fail to meet the standard will be enrolled in a remedial training program." Exactly 18:00 is not under 18:00, so the runner fails the standard and lands in remedial training. Choice A invents an award the passage never mentions. Choice C reverses the math by treating a tie as exceeding the standard. Choice D goes beyond what the passage supports, since nothing in the text discusses exemptions from future tests. Only B follows from the passage's wording without adding information.

14. C. It reduces the ability to concentrate and make decisions.

The passage states directly that "even a 2% loss of body water can reduce a person's ability to concentrate and make decisions." Choice C reproduces that wording almost verbatim. Choice A overreaches by adding "permanent," a claim the passage never makes. Choice B contradicts the passage outright, since 2% is below 5% and the text confirms an effect at that level. Choice D contradicts the opening line, which says dehydration impairs both physical and cognitive performance. The keyed answer is the only one the text actually supports.

15. C. 126 square feet

Area of a rectangle = length x width = $14 \times 9 = 126$ square feet.

16. C. $x = 7$

Isolate the variable in two steps. Add 7 to both sides to undo the subtraction: $3x = 21$. Divide both sides by 3 to undo the multiplication: $x = 7$. The choice $x = 3$ comes from dividing the original 14 by 3 and ignoring the -7 entirely. The choice $x = 5$ comes from subtracting 7 from 14 first ($14 - 7 = 7$), then dividing the wrong direction. The choice $x = 9$ comes from sign confusion, treating -7 as +7 and computing $(14 - 7) / 3$ backwards or $21 / 3$ with an extra add.

17. D. 32

An exponent counts how many times the base multiplies itself. $2^5 = 2 \times 2 \times 2 \times 2 \times 2 = 32$. Build it stepwise: $2 \times 2 = 4$, $\times 2 = 8$, $\times 2 = 16$, $\times 2 = 32$. The choice 10 comes from confusing exponentiation with multiplication and computing 2×5 . The choice 16 is 2^4 , one factor short. The choice 25 comes from swapping base and exponent and computing 5^2 instead of 2^5 .

18. C. 2

Dividing by a fraction means multiplying by its reciprocal: $\frac{3}{4} \times \frac{8}{3} = \frac{24}{12} = 2$.

19. B. 3 amperes

Ohm's Law solves for current as $I = V / R$. Plug in: $I = 12 \text{ V} / 4 \text{ ohms} = 3 \text{ A}$. The answer is 3 amperes. Choice A (0.33 A) inverts the formula and computes $R / V = 4 / 12$. Choice C (8 A) subtracts instead of dividing (12 minus 4). Choice D (48 A) multiplies V by R, which is the calculation for a totally different relationship and ignores that current is voltage divided by resistance, not the product.

20. C. They also go out.

A series circuit has one continuous loop, so current must pass through every bulb. When one filament opens, the loop breaks and current stops everywhere. All remaining bulbs go dark. Choice A (brighter) confuses series with parallel, where losing one branch can shift current. Choice B (normal operation) describes parallel wiring, where each bulb sits on its own independent path. Choice D (flicker but stay on) imagines a partial connection, but an open filament is a hard break, not an intermittent contact.

21. D. Ohm

Resistance is measured in ohms, symbol ohms. The four core electrical units pair one-to-one: volts measure voltage (electrical pressure), amperes measure current (flow rate of charge), watts measure power (energy per second), and ohms measure resistance (opposition to flow). Choice A (volt) confuses resistance with the driving voltage from Ohm's Law. Choice B (ampere) confuses it with the current that resistance opposes. Choice C (watt) measures power dissipated in a resistor, not the resistance itself.

22. B. Socket wrench with extension

A socket wrench accepts extensions and universal joints, letting you reach a bolt buried inside a recess where a straight-handled tool cannot sit square on the head. An open-end wrench needs side clearance to slide onto the flats and room to swing, which a recessed bolt does not give you. Adjustable pliers grip by squeezing the head and will round off the corners under any real torque. A torque screwdriver is for screw heads with a driver bit and is meant for measuring torque on small fasteners, not for reaching into deep cavities.

23. C. Dissipate heat from the engine coolant

The radiator is a heat exchanger. Hot coolant pumped from the engine flows through narrow tubes and fins, and air moving across those fins carries the heat away before the coolant returns to the block. Filtering oil is the oil filter's job in the lubrication system, which is a separate circuit from the cooling system. Fuel mixture is metered by the injectors or carburetor, not by the cooling components. Exhaust emissions are cleaned by the catalytic converter downstream of the engine, again a different system entirely.

24. B. Put on appropriate eye protection

Eye protection goes on before anything else because flying chips, sawdust, and a thrown blade tooth can reach your face the instant the saw spins up. Testing the blade on scrap and checking for a sharp blade are reasonable steps later in the sequence, but they expose your eyes to hazards if you do them with no PPE on. Letting a corded saw "warm up" plugged in is not a real practice and leaves a live tool unattended. The rule is gear up first, then handle the tool.

25. B. 4 feet

Lever balance requires equal torques on both sides of the fulcrum: $W_1 \times D_1 = W_2 \times D_2$. Plug in: $10 \text{ lb} \times 6 \text{ ft} = 15 \text{ lb} \times D_2$, so $60 = 15 \times D_2$, and $D_2 = 4 \text{ feet}$. Choice A (2 feet) divides 6 by 3 instead of using the torque equation. Choice C (6 feet) keeps the same distance and ignores that the heavier weight needs a shorter arm. Choice D (9 feet) puts the heavier weight farther out, which would unbalance the lever further since $15 \text{ lb} \times 9 \text{ ft} = 135 \text{ lb-ft}$, more than double the 60 lb-ft on the other side.

26. B. 50 RPM

Meshing gears conserve linear tooth speed, so RPM is inversely proportional to tooth count: $\text{RPM}_{\text{large}} = \text{RPM}_{\text{small}} \times (\text{teeth}_{\text{small}} / \text{teeth}_{\text{large}}) = 200 \times (10/40) = 50 \text{ RPM}$. Choice A (25 RPM) divides by 8 instead of 4, doubling the reduction. Choice C (100 RPM) only halves the speed, applying a 2:1 ratio instead of the actual 4:1. Choice D (800 RPM) inverts the formula and multiplies 200 by 4, treating the large gear as the faster one when in fact the larger gear always turns slower than the smaller one it meshes with.

27. B. 50 pounds

Newton's Second Law: if an object does not accelerate, the net force is zero. The crate is stationary, so static friction adjusts to exactly cancel the applied push. Friction = 50 pounds, opposite to the push. Choice A (0 pounds) ignores that something must be canceling the 50-pound push. Choice C (150 pounds) confuses friction with the difference between weight and applied force. Choice D (200 pounds) uses the full weight as the friction force, but weight acts vertically and is canceled by the normal force, not by horizontal friction. Static friction only equals what is needed to prevent motion, up to its maximum.

28. C. A square

Each right triangle has two equal legs and a hypotenuse. With the right angles meeting at a center, the four 90 degree corners account for the full 360 degrees around the point, and the equal legs line up edge to edge along four straight rays. The outer boundary is four equal hypotenuses meeting at right angles, which is a square. 'A circle' tempts anyone picturing pie slices, but straight hypotenuses cannot trace a curve. 'A hexagon' would require six pieces, not four. 'A rectangle' is technically true but incomplete: equal sides make this the special-case rectangle called a square.

29. C. 4

Folding in half once produces 2 layers, leaving 1 crease and 2 sections. Folding the same axis again doubles the layer count to 4 and adds a second crease parallel to the first, splitting each prior section in two. When unfolded the paper shows 3 parallel creases and 4 equal strips. Choosing '2' counts only the first fold. Choosing '3' counts creases instead of sections (a classic off-by-one). Choosing '6' confuses doubling with adding, as if each fold added 3 new sections. Doubling, not adding, is the rule for parallel folds along the same axis.

30. C. 12

Two-face cubes sit along the edges of the large cube but not at the corners (corners would be three-face) and not at the centers of faces (one-face). A cube has 12 edges. In a 3x3x3 grid, each edge has 3 small cubes along it: 2 corners plus 1 middle. Only that middle position counts as a two-face cube, giving 12 edges times 1 cube each = 12. The choice '8' is the corner count (three-face cubes), a common substitution. '6' is the count of face centers (one-face cubes). '24' double-counts edges or confuses with the 24 edge-positions on the surface.