PRACTICE EXAM 28: STEAMFITTERS APPRENTICE APTITUDE SIMULATION (100 QUESTIONS)

This editorial simulation contains 100 questions across reading, numerical comprehension, numerical reasoning, mechanical aptitude, and 3D visualization. Use a 90-minute practice target if your local program gives no timing guidance. Local programs set their own format, timing, and qualifying standards; this practice target is not an official requirement.

1. In the Fox Run practice set, Work card FOX-28-18 for the Fox Run crew says: isolate the line, attach a tag, photograph the gauge, then notify the lead. If an active leak is observed, notify the lead before taking the photograph. What is the first action when an active leak is present?

A. Remove the tag.
B. Photograph the gauge.
C. Notify the lead.
D. Restart the line.

2. In the Fox Run practice set, A Fox Run application notice states that forms received by 4:00 p.m. Friday are reviewed Monday. Incomplete forms are held until corrected. A complete form arrives Thursday morning. When is it first eligible for review?

A. Thursday afternoon.
B. Monday.
C. Friday morning.
D. The following Friday.

3. In the Fox Run practice set, The Fox checklist lists: inspect gasket, compare size, clean flange, record result. Which step must occur immediately after comparing size?

A. Clean the flange.

B. Inspect the gasket.
C. Record the result.
D. Install the valve.

4. In the Fox Run practice set, A supervisor note says, “Use the blue tags for equipment awaiting inspection; red tags mean out of service.” A valve has a blue tag. What does the note support?

A. It needs repainting.
B. It is out of service.
C. It passed inspection.
D. It is awaiting inspection.

5. In the Fox Run practice set, An inventory sheet marks gloves as “reorder at 12 pairs.” The shelf has 14 pairs. Which action follows the stated rule?

A. Discard two pairs.
B. Reorder immediately.
C. Do not reorder yet.
D. Move gloves to shipping.

6. In the Fox Run practice set, A practice memo allows calculators only during Section C. A candidate reaches Section B and asks to use one. What should the proctor do under the memo?

A. Allow it for one problem.
B. Wait until Section C.
C. Cancel the whole test.
D. Replace the calculator with a ruler.

7. In the Fox Run practice set, The Fox Run route sheet says the north gate is closed after 6:00 p.m.; deliveries after that time use the east gate. A delivery arrives at 6:20 p.m. Which gate applies?

A. The loading dock only.
B. North gate.
C. Either gate.
D. East gate.

8. In the Fox Run practice set, A reading passage states that a pressure reading is recorded only after the gauge settles for ten seconds. A trainee writes down the value immediately. Which requirement was missed?

A. Waiting for the gauge to settle.
B. Changing the pipe size.
C. Converting units twice.
D. Opening the drain.

9. In the Fox Run practice set, A work order permits solvent X on steel surfaces but prohibits it on painted labels. The part has steel and a painted label. Where may solvent X be used?

A. Across the entire part.
B. On the label only.
C. On the steel surface only.
D. Nowhere on the part.

10. In the Fox Run practice set, A training notice has three conditions: wear eye protection, keep the guard installed, and stop if vibration increases. Vibration rises during a cut. What does the notice require?

A. Stop the cut.
B. Remove the guard.
C. Continue more slowly.
D. Turn off eye protection.

11. In the Fox Run practice set, The Fox log records a start time, an end time, and the initials of the reviewer. One entry has times but no initials. What is missing?

A. A material invoice.
B. A second start time.
C. A pipe diameter.
D. Reviewer initials.

12. In the Fox Run practice set, A diagram key says solid lines are supply lines and dashed lines are return lines. A dashed line leaves a heat exchanger. How should it be classified?

A. Supply line.
B. Return line.
C. Electrical line.
D. Drain-only line.

13. In the Fox Run practice set, An instruction says, “Tighten bolts in a cross pattern, then recheck each bolt once.” Which action comes second?

A. Tighten the first bolt twice.
B. Recheck each bolt once.
C. Tighten in a circle.
D. Remove all bolts.

14. In the Fox Run practice set, A note distinguishes “scheduled” work from “urgent” work. Scheduled work may wait for the next planned shift; urgent work requires same-shift attention. A cracked bracket is labeled urgent. What follows?

A. File it without action.
B. Defer it one week.
C. Address it this shift.
D. Treat it as scheduled.

15. In the Fox Run practice set, The Fox Run test-room notice says scratch paper must be returned before leaving. A candidate finishes early. What must happen before departure?

A. Return the scratch paper.
B. Take the paper home.
C. Photograph the paper.
D. Leave it on the desk.

16. In the Fox Run practice set, A specification lists an acceptable gap of 1/16 inch or less. A measured gap is 3/32 inch. What does the specification indicate?

A. The measurement is irrelevant.
B. The gap is acceptable.
C. The gap is exactly nominal.
D. The gap is too large.

17. In the Fox Run practice set, A paragraph says the first sample is discarded, the second is labeled, and the third is tested. Which sample is labeled?

A. The third sample.
B. The first sample.
C. The second sample.
D. All three samples.

18. In the Fox Run practice set, A planner writes, “If weather delays delivery, call the supplier; otherwise, stage material by noon.” Weather delays the delivery. What action is selected?

A. Call the supplier.
B. Stage material by noon.
C. Cancel the order.

D. Stage material at midnight.

19. In the Fox Run practice set, A form has boxes for employee name, work area, date, and reviewer signature. The first three are complete, but the signature box is blank. What is the form status?

A. Ready for disposal.
B. Approved.
C. Overdue by definition.
D. Incomplete.

20. In the Fox Run practice set, A passage says a tool may be shared only after it is cleaned and returned to the marked cabinet. A worker cleans the tool but leaves it on a bench. What condition remains unmet?

A. Cleaning the tool.
B. Returning it to the marked cabinet.
C. Writing a new work order.
D. Changing the tool color.

21. In the Fox Run practice set, A tray contains 38 bolts plus 47 bolts, with both counts increased by 81. What is the total?

A. 252
B. 119
C. 128
D. 247

22. In the Fox Run practice set, A stock count of 142 is reduced by 58. Increase the starting count by 81; what remains?

A. 223
B. 165

C. 58
D. 173

23. In the Fox Run practice set, Each bundle has 7 fittings. There are 16 bundles plus 81 additional bundles. How many fittings?

A. 679
B. 97
C. 7
D. 665

24. In the Fox Run practice set, A foreman divides 369 washers equally into 12 bins. How many washers per bin?

A. 103
B. 12
C. 30.75
D. 107

25. In the Fox Run practice set, A 105-inch strip is cut to one quarter of its length. What is the cut length?

A. 0.25
B. 26.25
C. 105
D. 28.25

26. In the Fox Run practice set, A batch contains 241 pieces. Fifteen percent are inspected. How many pieces is that?

A. 32.15

B. 0.15
C. 42.15
D. 36.15

27. In the Fox Run practice set, Convert 86 feet to inches using 12 inches per foot.

A. 1020
B. 12
C. 1032
D. 1044

28. In the Fox Run practice set, Convert 177 inches to yards using 36 inches per yard.

A. 59.0
B. 3
C. 63.0
D. 57.0

29. In the Fox Run practice set, Using F = (9/5)C + 32, find Fahrenheit when C = 101.

A. 213.8
B. 101
C. 0
D. 217.8

30. In the Fox Run practice set, A rectangle is 95 units long and 8 units wide. What is its area?

A. 198
B. 8
C. 190
D. 760

31. In the Fox Run practice set, A rectangle is 92 units long and 6 units wide. What is its perimeter?

A. 92
B. 196
C. 6
D. 202

32. In the Fox Run practice set, Find the area of a triangle with base 93 and height 9.

A. 93
B. 9
C. 418.5
D. 427.5

33. In the Fox Run practice set, Find the average of readings 99 and 24.

A. 26
B. 20
C. 61.5
D. 70

34. In the Fox Run practice set, A ratio assigns 5 washers per fitting. How many washers for 84 fittings?

A. 84
B. 420
C. 5
D. 435

35. In the Fox Run practice set, An amount of 161 increases by 10 percent. What is the increase?

A. 16.1
B. 0.1
C. 18.1
D. 161

36. In the Fox Run practice set, A pump moves 88.2 gallons at 0.6 gallon per cycle. How many cycles?

A. 30
B. 0.6
C. 91
D. 147.0

37. In the Fox Run practice set, Add 84.25 and 2.5.

A. 2.5
B. 86.75
C. 87.25
D. 84.25

38. In the Fox Run practice set, Evaluate (87 × 4) + 8.

A. 364
B. 4
C. 356
D. 348

39. In the Fox Run practice set, How many complete groups of 9 are in 218?

A. 24

B. 9
C. 95
D. 97

40. In the Fox Run practice set, A drawing uses a scale of 1 to 48. What actual length corresponds to 82 drawing units?

A. 97
B. 18
C. 93
D. 3936

41. In the Fox Run practice set, A trainee earns $99 per hour for 7 hours. What is the gross amount?

A. 693
B. 762.3
C. 106
D. 594

42. In the Fox Run practice set, A crew installs 93 supports in 4 hours. At the same rate, how many supports in 7 hours?

A. 164.75
B. 162.75
C. 160.75
D. 93

43. In the Fox Run practice set, A truck travels 126 miles in 2 hours. What is its average speed?

A. 111
B. 68

C. 58
D. 63

44. In the Fox Run practice set, A recipe uses 2 parts sealant to 5 parts catalyst. How much catalyst is needed for 89 parts sealant?

A. 94
B. 178
C. 222.5
D. 445

45. In the Fox Run practice set, A column exerts 1 psi for every 2.31 feet of water. What pressure does 104.1 feet exert?

A. 44.064935
B. 46.064935
C. 45.064935
D. 104.1

46. In the Fox Run practice set, Use circumference = 3.14 × diameter for a circle with diameter 91.

A. 285.74
B. 142.87
C. 571.48
D. 91

47. In the Fox Run practice set, A cylinder has radius 4 and height 91. Using volume = $3.14r^2h$, what is its volume?

A. 1456
B. 1142.96

C. 50.24
D. 4571.84

48. In the Fox Run practice set, Solve 4x + 93 = 121.

A. 90
B. 7
C. 1.423529
D. 167

49. In the Fox Run practice set, Solve 3x − 90 = -60.

A. 8
B. 10
C. 12
D. 14

50. In the Fox Run practice set, A right triangle has legs 9 and 12. What is the hypotenuse?

A. 15
B. 21
C. 12
D. 18

51. In the Fox Run practice set, A line rises 93 units over a run of 5. What is its slope?

A. 0.053763
B. 19.6
C. 17.6
D. 18.6

52. In the Fox Run practice set, A supplier discounts a $181 order by 15 percent. What is the discount amount?

A. 36.2
B. 18.1
C. 27.15
D. 166

53. In the Fox Run practice set, A local rule in this exercise adds 6 percent tax to a $131 purchase. What tax is charged?

A. 7.86
B. 3.93
C. 15.72
D. 7

54. In the Fox Run practice set, A project has 101 working days and uses 3 days per phase. How many complete phases fit?

A. 33.666667
B. 33
C. 34
D. 3

55. In the Fox Run practice set, Pump A fills 4 gallons per minute and Pump B fills 3 gallons per minute. How many minutes for 109 gallons together?

A. 6
B. 27.25
C. 36.333333
D. 15.571429

56. In the Fox Run practice set, A hose delivers 117 gallons in 7 minutes. What is its flow rate?

A. 14.714286
B. 18.714286
C. 16.714286
D. 117

57. In the Fox Run practice set, Gear A has 93 teeth and drives Gear B with 117 teeth. If A turns 9 revolutions, how many does B turn?

A. 11.322581
B. 7.153846
C. 10
D. 8

58. In the Fox Run practice set, A box contains 84 red, 83 blue, and 86 green washers. What is the probability of drawing blue?

A. 0.6
B. 0.332016
C. 0.339921
D. 0.328063

59. In the Fox Run practice set, A rectangular plate 89 by 86 is enlarged by a linear factor of 2. What is the new area?

A. 8008
B. 15308
C. 30616
D. 7654

60. In the Fox Run practice set, A spool holds 688 labels divided equally among 8 racks. How many labels go on each rack?

A. 86
B. 85
C. 87
D. 89

61. In the Fox Run practice set, Two wrenches turn the same bolt. Which handle needs less hand force for the same turning effect?

A. The handle with a painted grip.
B. The shorter handle.
C. Either handle always needs equal force.
D. The longer handle.

62. In the Fox Run practice set, A fixed pulley is used to lift a load. What is its main ideal advantage?

A. It changes force direction.
B. It doubles the load weight.
C. It removes all friction.
D. It stores electrical charge.

63. In the Fox Run practice set, A movable pulley supports a load with two rope segments. Ignoring friction, what happens to the needed pull?

A. It equals zero.
B. It is twice the load.
C. It is about half the load.
D. It becomes four times the load.

64. In the Fox Run practice set, A plate experiences 201 pounds of force over 6 square inches. What pressure is applied?

A. 1206
B. 33.5
C. 67.0
D. 201

65. In the Fox Run practice set, A hydraulic press has a small piston and a larger piston. Which statement describes the ideal pressure?

A. Pressure disappears at the larger piston.
B. Pressure is transmitted through the fluid.
C. Only the small piston feels force.
D. The fluid changes into a solid.

66. In the Fox Run practice set, Which change most directly increases friction between two dry surfaces?

A. Removing all contact force.
B. Polishing both surfaces to zero roughness.
C. Increasing the normal force.
D. Separating the surfaces.

67. In the Fox Run practice set, A steel ball and a wooden block are placed in water. Which property determines whether each floats or sinks?

A. Relative density.
B. Color of the material.
C. Surface brightness.
D. Shape of the label.

68. In the Fox Run practice set, In a simple series circuit, what happens if one lamp opens?

A. The wire becomes longer.
B. The other lamp becomes a battery.
C. Current increases everywhere.
D. The circuit path is interrupted.

69. In the Fox Run practice set, In a parallel circuit, one branch opens while another remains intact. What is expected in the intact branch?

A. All branches must open.
B. It can still conduct.
C. The source reverses polarity.
D. The intact branch loses its wire.

70. In the Fox Run practice set, Which heat-transfer mode moves energy through direct contact between touching materials?

A. Reflection.
B. Radiation only.
C. Conduction.
D. Compression.

71. In the Fox Run practice set, A force is applied farther from a pivot. What happens to torque when force stays constant?

A. Torque increases.
B. Torque becomes zero.
C. Torque always halves.
D. The pivot disappears.

72. In the Fox Run practice set, A loaded cart is easier to tip when its center of gravity is higher because the weight line is more likely to move outside the base.

A. True only for empty carts.
B. False; height cannot matter.
C. True.
D. False; the base has no role.

73. In the Fox Run practice set, Which change makes an inclined plane require less ideal input force for the same height?

A. Adding a second load.
B. Making the ramp shorter.
C. Removing the height.
D. Making the ramp longer.

74. In the Fox Run practice set, A machine receives 200 joules and delivers 150 joules of useful output. What is its efficiency?

A. 350
B. 50
C. 80
D. 75

75. In the Fox Run practice set, A 10-newton force moves an object 4 meters in its direction. How much work is done?

A. 2.5
B. 40
C. 14
D. 400

76. In the Fox Run practice set, A circuit has 12 volts across a 4-ohm resistor. What current flows?

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

77. In the Fox Run practice set, A spring stretches farther when the applied load increases within its elastic range. Which relationship is illustrated?

A. Greater load, zero extension.
B. Greater load, greater extension.
C. Less load, greater extension always.
D. Extension independent of load.

78. In the Fox Run practice set, A valve handle is aligned with a pipe in a stated exercise rule. What position does the rule identify?

A. Locked out.
B. Closed.
C. Open.
D. Disconnected.

79. In the Fox Run practice set, A pipe support is loose and the line is vibrating. What is the safest reasoning step before adjustment?

A. Stop and secure the work area.
B. Increase the vibration.
C. Remove every support.
D. Ignore the movement.

80. In the Fox Run practice set, Two equal opposite forces act along the same line on a stationary part. What is the net force?

A. 4
B. 2
C. 1
D. 0

81. In the Fox Run practice set, A cube has opposite face pairs A–D, B–E, and C–F. Which face is opposite A?

A. D
B. B
C. C
D. E

82. In the Fox Run practice set, A square plate is rotated 90 degrees clockwise. Which edge moves to the top if the original right edge is marked R?

A. The original left edge.
B. The original top edge.
C. The original bottom edge.
D. R

83. In the Fox Run practice set, A cube net has four squares in a row, with one square attached above the second and one below the second. Which row square is opposite the second square after folding?

A. The first square.
B. The fourth square.
C. The square above.
D. The square below.

84. In the Fox Run practice set, A drawing shows a bolt head above a washer and a nut below the washer. Viewed from the side, which part is lowest?

A. The washer.
B. The bolt head.
C. The nut.
D. The bolt shank.

85. In the Fox Run practice set, A rectangular panel is mirrored left-to-right. A mark originally near the left edge appears where?

A. At the same left edge.
B. Near the top edge.
C. Near the bottom edge.
D. Near the right edge.

86. In the Fox Run practice set, A stack has three cubes on the bottom row and one cube centered on top. How many cubes are visible from the front?

A. Three.
B. Four.
C. Two.
D. Six.

87. In the Fox Run practice set, A pipe route turns north, then east, then south by the same distance. Relative to its start, where is the endpoint?

A. South.
B. North.
C. East.
D. At the start.

88. In the Fox Run practice set, A square is divided by both diagonals. Into how many triangular regions is it divided?

A. 4
B. 2
C. 3
D. 8

89. In the Fox Run practice set, A pattern repeats red, blue, green, yellow. What color is in position 10?

A. Red.
B. Blue
C. Green.
D. Yellow.

90. In the Fox Run practice set, A rectangular block is viewed from above. Which dimension is usually represented by the plan view?

A. Length and width.
B. Height only.
C. Width and height only.
D. Diagonal only.

91. In the Fox Run practice set, A hole drilled straight through a cube from front to back is circular in the front view. What shape is its side-view opening?

A. A pentagon.
B. A triangle.
C. A circle.
D. A rectangle.

92. In the Fox Run practice set, A ladder leans against a wall. Its foot moves farther from the wall while the top stays on the wall. What happens to the angle with the ground?

A. It becomes 90 degrees.
B. It increases.
C. It decreases.
D. It stays fixed.

93. In the Fox Run practice set, A technical note labels three parallel lines 1, 2, and 3 from left to right. The image is flipped horizontally. Which label is now leftmost?

A. 1.
B. 3
C. 2.
D. The labels disappear.

94. In the Fox Run practice set, A rectangular opening is 2 units wide and 5 units high. Rotating the drawing 90 degrees swaps these dimensions. What is the new width?

A. 5
B. 2
C. 7
D. 10

95. In the Fox Run practice set, A cube is painted on all six faces and cut into 27 equal smaller cubes. How many small cubes have paint on three faces?

A. 27
B. 6
C. 12
D. 8

96. In the Fox Run practice set, A route moves 4 units east, 4 north, 4 west, and 4 south. Where does it finish?

A. At the start.
B. 4 units east.
C. 4 units north.
D. 8 units away.

97. In the Fox Run practice set, A symbol points up. It is rotated 180 degrees, then 90 degrees clockwise. Which direction does it point?

A. Up.
B. Right.
C. Left.
D. Down.

98. In the Fox Run practice set, A rectangular prism has dimensions 2 by 3 by 4. What is its volume?

A. 18
B. 9
C. 12
D. 24

99. In the Fox Run practice set, A view shows a circle inside a square outline. Which object best matches that view when looking straight at its end?

A. A rectangular bar.
B. A cone.
C. A cylinder.
D. A triangular prism.

100. In the Fox Run practice set, A sequence of arrow turns is clockwise, clockwise, counterclockwise, clockwise. What is the net turn?

A. Four clockwise turns.

B. Two clockwise turns.

C. Two counterclockwise turns.

D. No turns.

Practice Exam 28: Answer Key and Explanations

1. C — The active-leak exception moves notification ahead of photography. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

2. B — The complete Thursday submission enters the next Monday review cycle. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

3. A — The checklist sequence places cleaning directly after the size comparison. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

4. D — The blue-tag definition states awaiting inspection, without adding another status. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

5. C — Fourteen pairs exceed the stated reorder point, so ordering is not triggered. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

6. B — The memo limits calculator use to Section C, so Section B remains calculator-free. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

7. D — The time is after 6:00 p.m., activating the east-gate instruction. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

8. A — The passage makes the ten-second settling period a prerequisite to recording. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

9. C — The permission applies to steel, while the label is expressly excluded. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

10. A — The stop condition is explicit and overrides the normal continuation of the cut. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

11. D — The log format names reviewer initials as the third required entry. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

12. B — The key assigns dashed lines to return service, regardless of the component. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

13. B — The instruction gives the cross-pattern tightening first and one recheck second. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

14. C — The definition of urgent work requires attention during the same shift. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

15. A — Returning scratch paper is an explicit departure requirement. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

16. D — Three thirty-seconds exceeds one sixteenth, so the stated limit is not met. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

17. C — The sentence assigns labeling specifically to the second sample. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

18. A — The weather-delay condition selects the supplier call and excludes the alternative. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

19. D — A required reviewer signature is missing, so the form is not complete. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

20. B — Both conditions are required; cleaning alone does not complete the return step. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

21. D — Adding the two adjusted counts gives the stated total. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

22. B — Subtracting 58 from the adjusted starting value gives the remainder. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

23. A — Multiplying the adjusted bundle count by seven gives the total. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

24. C — Dividing the adjusted quantity into twelve equal bins gives the quotient. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

25. B — Taking one quarter of the adjusted strip gives the cut length. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

26. D — Multiplying the adjusted batch by fifteen percent gives the inspected count. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

27. C — Converting each adjusted foot with twelve inches gives the total. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

28. A — Dividing the adjusted inches by thirty-six gives the yard count. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

29. A — Applying nine-fifths and then adding thirty-two gives Fahrenheit. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

30. D — Multiplying adjusted length by width gives rectangle area. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an

unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

31. B — Adding the dimensions and doubling the sum gives perimeter. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

32. C — One-half base times height gives the triangle area. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

33. C — Adding both readings and dividing by two gives the average. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

34. B — Multiplying the adjusted fitting count by five gives washers. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

35. A — Multiplying the adjusted amount by ten percent gives the increase. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

36. D — Dividing the adjusted gallons by six-tenths gives cycles. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

37. B — Adding the two decimal quantities gives the adjusted sum. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

38. C — Multiplication precedes addition, producing the evaluated expression. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

39. A — Whole-number division counts only complete groups of nine. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or

add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

40. D — Multiplying drawing units by the scale factor gives actual length. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

41. A — Multiplying the hourly rate by the stated hours gives the gross amount. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

42. B — The constant-rate proportion scales supports by the ratio of the two times. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

43. D — Average speed divides the distance by elapsed time. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

44. C — The ratio multiplies sealant parts by five halves to obtain catalyst parts. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

45. C — The stated pressure rule divides water height by 2.31 feet per psi. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

46. A — Circumference uses the full diameter in the supplied formula. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

47. D — Cylinder volume squares the radius before multiplying by height and 3.14. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and

supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

48. B — Subtracting the constant and dividing by four isolates x. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

49. B — Adding the subtracted constant and dividing by three gives x. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

50. A — The Pythagorean relationship takes the square root of the summed squares. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

51. D — Slope is rise divided by run using the two stated changes. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

52. C — The discount amount is fifteen percent of the original order. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

53. A — The exercise-defined tax is six percent of the purchase price. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

54. B — Complete phases use whole-number division and ignore the partial remainder. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

55. D — Combined rate is seven gallons per minute before dividing the volume. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

56. C — Flow rate divides gallons by minutes. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

57. B — Driven revolutions equal driver revolutions times the tooth ratio. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

58. D — Probability is favorable blue washers divided by the total washers. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

59. C — Doubling both dimensions multiplies area by the square of two. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

60. A — Equal division assigns the total labels evenly to eight racks. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

61. D — A longer lever arm produces the same turning effect with less force. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

62. A — A fixed pulley redirects the pull while leaving ideal force magnitude unchanged. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

63. C — Two supporting segments share the load, reducing the ideal pull to one-half. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

64. B — Pressure equals force divided by contact area. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported

fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

65. B — An enclosed fluid transmits applied pressure, allowing force multiplication by area. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

66. C — Greater normal force increases the resisting frictional interaction in this comparison. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

67. A — Floating depends on density compared with the surrounding fluid, not appearance. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

68. D — An open component breaks the single current path in a series circuit. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

69. B — Separate parallel paths allow an unaffected branch to remain complete. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

70. C — Conduction transfers thermal energy through contact and particle interactions. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

71. A — Torque equals force times perpendicular distance, so increasing distance increases torque. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

72. C — A higher center of gravity increases tipping leverage when the weight line shifts. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

73. D — A longer ramp spreads the required work over a greater distance. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

74. D — Efficiency is useful output divided by input, expressed as a percentage. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

75. B — Work equals force multiplied by displacement in the force direction. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

76. A — Ohm’s law gives current by dividing voltage by resistance. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

77. B — Within the stated range, extension increases with applied load. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

78. C — The exercise rule defines alignment with the pipe as the open position. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

79. A — Securing the area prevents movement from becoming an uncontrolled hazard. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

80. D — Equal opposite forces cancel, leaving zero net force. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

81. A — Opposite-face pairs are given directly, so A matches D. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

82. D — A clockwise quarter-turn carries the original right edge to the top. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

83. B — The four-square strip wraps around, placing the first and third adjacent to the center and the fourth opposite it. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning.

84. C — The side view preserves the stated vertical order from head through washer to nut. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning.

85. D — A horizontal mirror reverses left and right while preserving vertical position. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

86. B — The front view shows the three bottom cubes and the centered cube above them. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning.

87. C — The north and south movements cancel, leaving the eastward segment. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

88. A — Both diagonals cross at the center and create four triangular regions. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or

add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

89. B — Position ten is the second position in a four-color repeating cycle. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

90. A — A plan view looks down and shows the horizontal footprint. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

91. D — The cylindrical hole appears circular end-on and rectangular along its length from the side. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning.

92. C — With the same height and a longer base distance, the ladder becomes shallower. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

93. B — A horizontal flip reverses the left-to-right order. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

94. A — A quarter-turn exchanges the original width and height. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

95. D — Only the eight corner cubes touch three outer faces. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

96. A — Equal opposite movements cancel in both directions. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

97. C — The combined turn is 270 degrees clockwise, taking up to left. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or

add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

98. D — Volume multiplies the three perpendicular dimensions. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

99. C — A cylinder presents a circular end within a surrounding square boundary. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.

100. B — Three clockwise and one counterclockwise turn leave two clockwise turns. The keyed choice follows directly from the information given. The other choices ignore a condition, reverse the relationship, or add an unsupported fact. Tying the decision to stated data prevents assumptions and supports reliable aptitude reasoning. This preserves the stated constraint and demonstrates disciplined reasoning.