PRACTICE EXAM 22: 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 Stonebridge practice set, Work card STO-22-18 for the Stonebridge 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 Stonebridge practice set, A Stonebridge 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. The following Friday.
B. Thursday afternoon.
C. Friday morning.
D. Monday.

3. In the Stonebridge practice set, The Stonebridge 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 Stonebridge 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 is out of service.
B. It is awaiting inspection.
C. It passed inspection.
D. It needs repainting.

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

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

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

7. In the Stonebridge practice set, The Stonebridge 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. North gate.
B. East gate.
C. Either gate.
D. The loading dock only.

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

9. In the Stonebridge 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. On the steel surface only.
B. On the label only.
C. Across the entire part.
D. Nowhere on the part.

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

11. In the Stonebridge practice set, The Stonebridge 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 pipe diameter.
B. A second start time.
C. Reviewer initials.
D. A material invoice.

12. In the Stonebridge 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. Drain-only line.
B. Supply line.
C. Electrical line.
D. Return line.

13. In the Stonebridge 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 Stonebridge 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. Address it this shift.
B. Defer it one week.
C. File it without action.
D. Treat it as scheduled.

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

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

16. In the Stonebridge 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 gap is exactly nominal.
B. The gap is acceptable.
C. The gap is too large.
D. The measurement is irrelevant.

17. In the Stonebridge 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 second sample.
B. The first sample.
C. The third sample.
D. All three samples.

18. In the Stonebridge 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. Stage material at midnight.
B. Stage material by noon.
C. Cancel the order.

D. Call the supplier.

19. In the Stonebridge 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. Approved.
B. Incomplete.
C. Overdue by definition.
D. Ready for disposal.

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

21. In the Stonebridge practice set, A tray contains 38 bolts plus 47 bolts, with both counts increased by 63. What is the total?

A. 101
B. 211
C. 110
D. 216

22. In the Stonebridge practice set, A stock count of 142 is reduced by 58. Increase the starting count by 63; what remains?

A. 155

B. 205
C. 58
D. 147

23. In the Stonebridge practice set, Each bundle has 7 fittings. There are 16 bundles plus 63 additional bundles. How many fittings?

A. 553
B. 79
C. 7
D. 539

24. In the Stonebridge practice set, A foreman divides 351 washers equally into 12 bins. How many washers per bin?

A. 85
B. 12
C. 29.25
D. 89

25. In the Stonebridge practice set, A 87-inch strip is cut to one quarter of its length. What is the cut length?

A. 23.75
B. 0.25
C. 87
D. 21.75

26. In the Stonebridge practice set, A batch contains 223 pieces. Fifteen percent are inspected. How many pieces is that?

A. 39.45
B. 0.15
C. 33.45
D. 29.45

27. In the Stonebridge practice set, Convert 68 feet to inches using 12 inches per foot.

A. 816
B. 12
C. 804
D. 828

28. In the Stonebridge practice set, Convert 159 inches to yards using 36 inches per yard.

A. 3
B. 53.0
C. 57.0
D. 51.0

29. In the Stonebridge practice set, Using F = (9/5)C + 32, find Fahrenheit when C = 83.

A. 0
B. 83
C. 181.4
D. 185.4

30. In the Stonebridge practice set, A rectangle is 77 units long and 8 units wide. What is its area?

A. 616
B. 8
C. 154

D. 162

31. In the Stonebridge practice set, A rectangle is 74 units long and 6 units wide. What is its perimeter?

A. 74
B. 160
C. 6
D. 166

32. In the Stonebridge practice set, Find the area of a triangle with base 75 and height 9.

A. 346.5
B. 9
C. 75
D. 337.5

33. In the Stonebridge practice set, Find the average of readings 81 and 24.

A. 70
B. 20
C. 26
D. 52.5

34. In the Stonebridge practice set, A ratio assigns 5 washers per fitting. How many washers for 66 fittings?

A. 5
B. 66
C. 330
D. 345

35. In the Stonebridge practice set, An amount of 143 increases by 10 percent. What is the increase?

A. 14.3
B. 0.1
C. 16.3
D. 143

36. In the Stonebridge practice set, A pump moves 70.2 gallons at 0.6 gallon per cycle. How many cycles?

A. 0.6
B. 117.0
C. 73
D. 30

37. In the Stonebridge practice set, Add 66.25 and 2.5.

A. 66.25
B. 2.5
C. 69.25
D. 68.75

38. In the Stonebridge practice set, Evaluate (69 × 4) + 8.

A. 292
B. 4
C. 284
D. 276

39. In the Stonebridge practice set, How many complete groups of 9 are in 200?

A. 9
B. 22
C. 77
D. 79

40. In the Stonebridge practice set, A drawing uses a scale of 1 to 48. What actual length corresponds to 64 drawing units?

A. 3072
B. 18
C. 75
D. 79

41. In the Stonebridge practice set, A trainee earns $81 per hour for 7 hours. What is the gross amount?

A. 623.7
B. 567
C. 88
D. 486

42. In the Stonebridge practice set, A crew installs 75 supports in 4 hours. At the same rate, how many supports in 7 hours?

A. 75
B. 133.25
C. 129.25
D. 131.25

43. In the Stonebridge practice set, A truck travels 108 miles in 2 hours. What is its average speed?

A. 49
B. 59
C. 54
D. 93

44. In the Stonebridge practice set, A recipe uses 2 parts sealant to 5 parts catalyst. How much catalyst is needed for 71 parts sealant?

A. 177.5
B. 142
C. 76
D. 355

45. In the Stonebridge practice set, A column exerts 1 psi for every 2.31 feet of water. What pressure does 86.1 feet exert?

A. 38.272727
B. 37.272727
C. 36.272727
D. 86.1

46. In the Stonebridge practice set, Use circumference = 3.14 × diameter for a circle with diameter 73.

A. 73
B. 114.61
C. 458.44
D. 229.22

47. In the Stonebridge practice set, A cylinder has radius 6 and height 73. Using volume = $3.14r^2h$, what is its volume?

A. 8251.92
B. 1375.32
C. 113.04
D. 2628

48. In the Stonebridge practice set, Solve $4x + 75 = 103$.

A. 1.537313
B. 72
C. 7
D. 131

49. In the Stonebridge practice set, Solve $3x - 72 = -42$.

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

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

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

51. In the Stonebridge practice set, A line rises 75 units over a run of 5. What is its slope?

A. 14
B. 16
C. 15

D. 0.066667

52. In the Stonebridge practice set, A supplier discounts a $163 order by 15 percent. What is the discount amount?

A. 16.3
B. 24.45
C. 32.6
D. 148

53. In the Stonebridge practice set, A local rule in this exercise adds 6 percent tax to a $113 purchase. What tax is charged?

A. 6.78
B. 3.39
C. 13.56
D. 7

54. In the Stonebridge practice set, A project has 83 working days and uses 3 days per phase. How many complete phases fit?

A. 3
B. 27.666667
C. 28
D. 27

55. In the Stonebridge practice set, Pump A fills 4 gallons per minute and Pump B fills 3 gallons per minute. How many minutes for 91 gallons together?

A. 22.75
B. 13

C. 30.333333
D. 6

56. In the Stonebridge practice set, A hose delivers 99 gallons in 7 minutes. What is its flow rate?

A. 12.142857
B. 16.142857
C. 14.142857
D. 99

57. In the Stonebridge practice set, Gear A has 75 teeth and drives Gear B with 99 teeth. If A turns 9 revolutions, how many does B turn?

A. 11.88
B. 6.818182
C. 10
D. 8

58. In the Stonebridge practice set, A box contains 66 red, 65 blue, and 68 green washers. What is the probability of drawing blue?

A. 0.326633
B. 0.331658
C. 0.341709
D. 0.6

59. In the Stonebridge practice set, A rectangular plate 71 by 68 is enlarged by a linear factor of 2. What is the new area?

A. 5110
B. 9656

C. 19312
D. 4828

60. In the Stonebridge practice set, A spool holds 544 labels divided equally among 8 racks. How many labels go on each rack?

A. 71
B. 67
C. 69
D. 68

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

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

63. In the Stonebridge 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 Stonebridge practice set, A plate experiences 183 pounds of force over 6 square inches. What pressure is applied?

A. 30.5
B. 1098
C. 61.0
D. 183

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

82. In the Stonebridge 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 bottom edge.
B. The original top edge.
C. R
D. The original left edge.

83. In the Stonebridge 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 fourth square.
B. The first square.
C. The square above.
D. The square below.

84. In the Stonebridge 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 bolt head.
B. The nut.
C. The washer.
D. The bolt shank.

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

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

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

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

91. In the Stonebridge 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 triangle.
B. A rectangle.
C. A circle.
D. A pentagon.

92. In the Stonebridge 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 decreases.
B. It increases.
C. It becomes 90 degrees.
D. It stays fixed.

93. In the Stonebridge 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. 3
B. 1.
C. 2.
D. The labels disappear.

94. In the Stonebridge 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. 2
B. 5
C. 7
D. 10

95. In the Stonebridge 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. 12
B. 6
C. 8
D. 27

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

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

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

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

99. In the Stonebridge 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 cylinder.
B. A cone.
C. A rectangular bar.
D. A triangular prism.

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

A. No turns.
B. Four clockwise turns.
C. Two counterclockwise turns.
D. Two clockwise turns.

Practice Exam 22: 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. D — 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. B — 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. A — 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. C — 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. B — 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. D — 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. A — 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. B — 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. C — 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. D — 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. A — 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. D — 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. C — 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. A — 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. D — 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. B — 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. C — 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. B — 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. D — 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. D — 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. C — 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. A — 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. B — 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. C — 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. A — 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. D — 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. D — 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. C — 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. B — 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. D — 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. B — 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. A — 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. B — 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. D — 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. C — 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. A — 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. B — 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. D — 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. A — 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. C — 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. A — 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. D — 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. C — 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. B — 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. D — 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. B — 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. A — 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. D — 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. B — 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. A — 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. D — 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. A — 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. C — 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. B — 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. D — 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. B — 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. C — 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. A — 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. B — 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. D — 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. C — 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. A — 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. D — 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. C — 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. A — 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. B — 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. C — 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. D — 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. B — 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. A — 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. A — 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. B — 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. C — 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. D — 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. B — 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. A — 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. D — 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.