

Numerical Reasoning drill (2)

11. What number comes next in the series? 48, 37, 26, 15, 4, ?

EASY

- A. 15 B. -6 C. -7 D. -18 E. -8

12. What number comes next in the series? 704, 352, 176, 88, 44, ?

EASY

- A. 88 B. 0 C. 42 D. 22 E. 11

13. What number comes next in the series? 27, 18, 9, 0, -9, -18, ?

EASY

- A. -9 B. -28 C. -26 D. -36 E. -27

14. What number comes next in the series? 29, 20, 23, 14, 17, ?

MEDIUM

- A. 8 B. 11 C. 20 D. 29 E. 26

15. What number comes next in the series? 3, -9, 27, -81, 243, ?

MEDIUM

- A. 567 B. 729 C. -729 D. 2,187 E. 240

16. What number is missing from the series? 5, 10, 20, ?, 80, 160

MEDIUM

- A. 60 B. 30 C. 40 D. 22 E. 50

17. What number is missing from the series? 23, 30, 39, ?, 63, 78

MEDIUM

- A. 51 B. 48 C. 54 D. 52 E. 50

18. What number comes next in the series? 6, 8, 12, 20, 36, ?

MEDIUM

- A. 68 B. 64 C. 52 D. 72 E. 32

19. What number comes next in the series? 33, 46, 61, 78, 97, ?

MEDIUM

- A. 118 B. 117 C. 121 D. 141 E. 116

20. What number comes next in the series? 23, 27, 33, 41, 51, 63, ?

MEDIUM

- A. 79 B. 87 C. 75 D. 77 E. 65

Numerical Reasoning drill key (2)

7. A **ARITHMETIC** Find the change from each term to the next: +13, +13, +13, +13.

The series adds 13 every time.

$$80 + 13 = 93.$$

Answer: 93

Why not B: Went the wrong direction (reversed the sign of the step).

Why not C: Miscalculated the gap by one (one short).

Why not D: Miscalculated the gap by one.

Why not E: Skipped a term (added the difference twice).

8. D **GEOMETRIC** Each term is half of the one before.

$$320 \div 2 = 160, \text{ and so on.}$$

$$20 \div 2 = 10.$$

Answer: 10

Why not A: Subtracted 2 instead of dividing by 2.

Why not B: Doubled instead of halving.

Why not C: Used the last difference instead of halving.

Why not E: Skipped a term (halved twice).

9. D **ARITHMETIC** Find the change from each term to the next: -3, -3, -3, -3.

The series subtracts 3 every time.

$$3 - 3 = 0.$$

Answer: 0

Why not A: Skipped a term (added the difference twice).

Why not B: Went the wrong direction (reversed the sign of the step).

Why not C: Miscalculated the gap by one (one short).

Why not E: Miscalculated the gap by one.

10. B **GEOMETRIC** Each term is 3 times the one before ($6 \times 3 = 18$).

The differences are not equal, but the ratio is.

$$486 \times 3 = 1,458.$$

Answer: 1,458

Why not A: Used the last difference instead of the ratio.

Why not C: Added the first difference as if the series added a fixed amount.

Why not D: Skipped a term (multiplied twice).

Why not E: Added 3 instead of multiplying by 3.

11. C **ARITHMETIC** Find the change from each term to the next: -11, -11, -11, -11.

The series subtracts 11 every time.

$$4 - 11 = -7.$$

Answer: -7

Why not A: Went the wrong direction (reversed the sign of the step).

Why not B: Miscalculated the gap by one (one short).

Why not D: Skipped a term (added the difference twice).

Why not E: Miscalculated the gap by one.

12. D **GEOMETRIC** Each term is half of the one before.

$$704 \div 2 = 352, \text{ and so on.}$$

$$44 \div 2 = 22.$$

Answer: 22

Why not A: Doubled instead of halving.

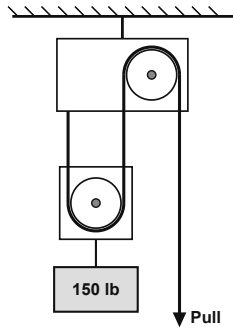
Why not B: Used the last difference instead of halving.

Why not C: Subtracted 2 instead of dividing by 2.

Why not E: Skipped a term (halved twice).

Practice Test 1: Mechanical Reasoning (continued)

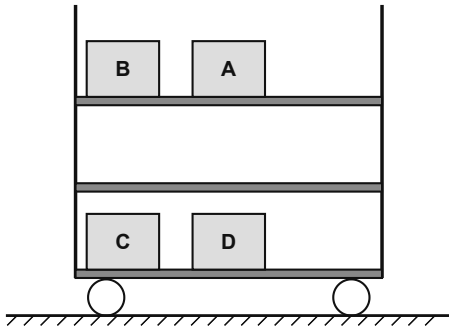
6. The 150 lb load hangs from the pulley system shown. The system has one fixed pulley at the top and one moving pulley on the load. The rope is tied to the top, and you pull down on its free end. How many rope segments hold up the load (the moving part)? Ignore friction and the weight of the pulleys and rope.



- A. 4
- C. 3

- B. 1
- D. 2

7. A 120 lb spool of wire can be placed in spot A, B, C or D on this 3-shelf cart (front view). In which spot is the loaded cart most likely to tip over sideways?



- A. Spot A
- C. Spot C

- B. Spot B
- D. Spot D