Quiz Date: 22nd March 2020

Directions (1-5): Find the wrong number in the given series, according to given pattern:

Q1.   539,   566,   597,   636,   691,   780
(a) 691
(b) 780
(c) 566
(d) 539
(e) 636

Q2.   6,   14,   59,   299,   1799,   12599
(a) 14
(b) 299
(c) 1799
(d) 59
(e) 6

Q3.   7,   27,   237,   279,   783,   858
(a) 27
(b) 237
(c) 279
(d) 858
(e) 783

Q4.   37,   150,   306,   511,   763,   1062
(a) 150
(b) 1062
(c) 306
(d) 763
(e) 511

Q5.   4,   2,   3,   6,   16,   70
(a) 6
(b) 2
(c) 3
(d)70
(e) 16

Q6. Yogesh mark up an article 40% above its cost price. At the time of sale, he gave 20% discount on mark price but take 2.5% CGST and 2.5% SGST as tax on discounted price of article. On selling the article Yogesh earns Rs. 352 as profit. Find the mark price of article.
(a) 2000
(b) 1400
(c) 2800
(d) 2200
(e) 2400

Q7. Marked price of two articles A and B are in the ratio of 7 : 9, at the time of selling shopkeeper gives discount of d% on article A and (d + 5)% on article B and made a profit of 25% on each article, if cost price of article A and B are in ratio 112 : 135. Then find percent of discount given by shopkeeper on both articles?
(a) 12.5%, 17.5%
(b) 25%, 30%
(c) 10%, 15%
(d) 15 %, 20%
(e) 20%, 25%

Q8. A river is flowing with a steady speed of 4 km/h. One rows his boat downstream in the river and then returns by rowing upstream in the same river. When he returns to the starting point, the total distance covered by him is 42 km. If the return journey takes 2 h more than his outward journey, then the speed of his rowing in still water must be
(a) 12 km/h
(b) 10 km/h
(c) 9 km/h
(d) 8 km/h
(e) None of these

Q9. A thief is spotted by a policeman from a distance of 150 metres. When the policeman starts the chase, the thief also starts running. Assuming the speed of the thief 12 kilometres an hour, and that of the policeman 18 kilometres an hour, how far will have the thief run before he is overtaken?
(a) 150 metres
(b) 200 metres
(c) 300 metres
(d) 1 km
(e) 450 meters

Q10. The area of rectangular field is thrice that of a square field. Length of rectangular field is 40 cm and breadth is $\frac{3}{2}$ times of the side of square. Then find the sum of the cost of gravelling of both the fields at the rate of Rs. 12.5/m^2 and the difference between cost of fencing of these fields at the rate of Rs. 7.25/m.
(a) Rs. 20000, Rs. 445
(b) Rs. 24000, Rs. 435

(c) Rs. 24000, Rs. 445
(d) Rs. 20000, Rs. 435
(e) None of these

Directions (11-15): What should come in place of question mark (?) in the following given questions?

Q11. 3939 ÷ 3 + 6363 ÷ 3 – 9696 ÷ 6 + 123 × 2 = ?
(a) 2064
(b) 2146
(c) 1964
(d) 2046
(e) 2164

Q12. $\frac{(0.673)^3 + (1.327)^3}{(0.673)^2 + (1.327)^2 - 0.673 \times 1.327} = 2^2 \times (?)^{-1}$
(a) 1
(b) 2
(c) 4
(d) 2^{-1}
(e) 2^{-2}

Q13. $1\frac{6}{7} \times 1\frac{5}{6} \times 1\frac{4}{5} \div 6\frac{9}{70} = \frac{1}{5} \times ?$
(a) 1
(b) 2
(c) 3
(d) 4
(e) 5

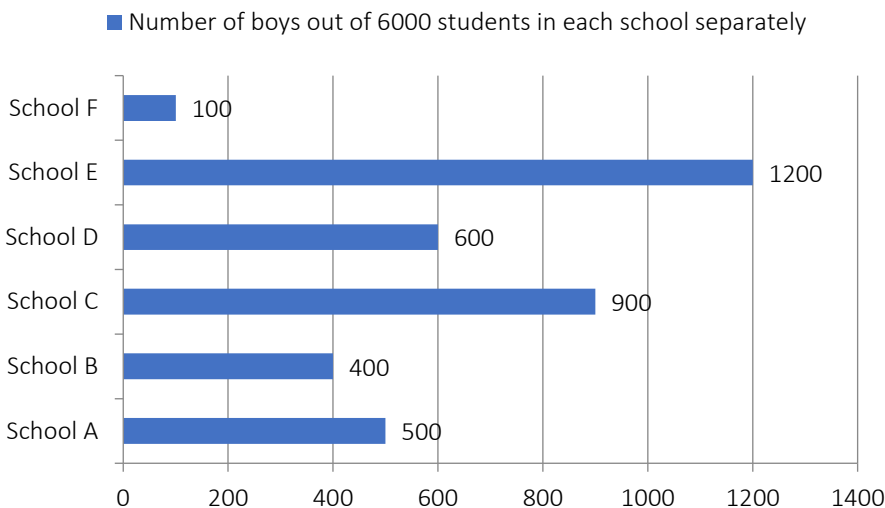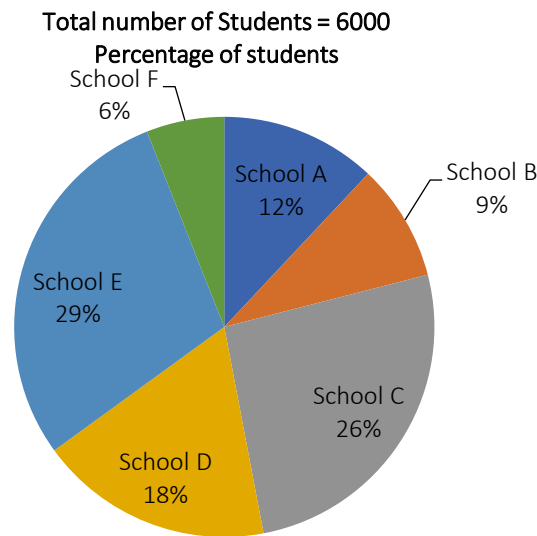Q14. $(8)^{0.75} \times (4096)^{0.25} \div (64)^{-1} = (8)^?$
(a) 2.25
(b) 3.0
(c) 3.25
(d) 3.50
(e) 3.75

Q15. (9% of 936)−(12.5% of 496)+?=9% of 336 +$\frac{2}{5} of$ 1375
(a) 558
(b) 520
(c) 647
(d) 490
(e) 598

Directions (16-20): Study the following pie-chart and bar diagram and answer the following questions.
Percentage-wise distribution of Students in six different Schools

Total number of Students = 6000
Percentage of students

- School F 6%
- School A 12%
- School B 9%
- School C 26%
- School D 18%
- School E 29%

■ Number of boys out of 6000 students in each school separately

- School F: 100
- School E: 1200
- School D: 600
- School C: 900
- School B: 400
- School A: 500

Q16. What is the sum of the number of girls in School C, the number of girls in School E and the number of boys in School D together?
(a) 1700
(b) 1900
(c) 1600
(d) 1800
(e) 1500

Q17. What is the ratio of the number of boys in School C, the number of girls in School B and the total number of students in School E?
(a) 45 : 7 : 97
(b) 43 : 9 : 97
(c) 45 : 7 : 87

(d) 43 : 9 : 87
(e) None of these

Q18. What is the difference between the total number of students in School F and the number of boys in School E?
(a) 820
(b) 860
(c) 880
(d) 900
(e) 840

Q19. In which of the following schools is the total number of students equal to the number of girls in School E?
(a) A
(b) B
(c) C
(d) D
(e) F

Q20. The number of girls in School A is approximately what percentage of the total number of students in School B?
(a) 55
(b) 50
(c) 33
(d) 45
(e) 37

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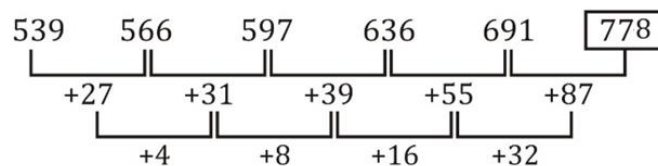English | Quant | Reasoning
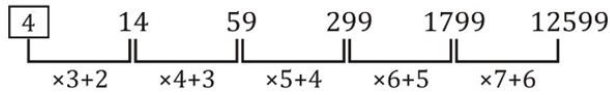DI | Puzzle | Computer | Banking

English Medium

Solutions

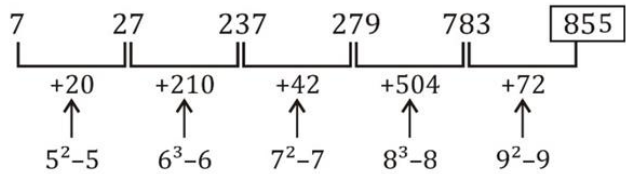S1. Ans.(b)
Sol.
Pattern of series is —

Wrong number = 780
Right number → 691 + 87 = 778

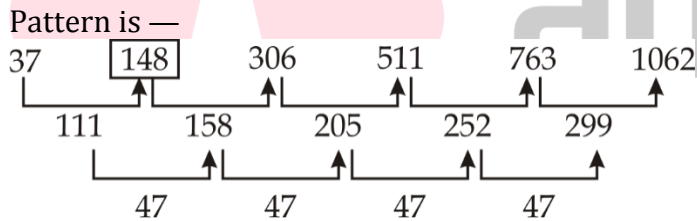S2. Ans.(e)
Sol.
Pattern of series is —

```
  ┌───┐     14      59      299    1799   12599
  │ 4 │
  └───┘  ×3+2   ×4+3   ×5+4   ×6+5   ×7+6
```

So wrong number = 6
Right number = $\frac{14-2}{3}$ = 4

S3. Ans.(d)
Sol.

```
  7      27      237     279     783    ┌─────┐
                                        │ 855 │
                                        └─────┘
     +20    +210    +42     +504    +72
      ↑      ↑       ↑       ↑       ↑
    5²-5   6³-6    7²-7    8³-8    9²-9
```

Wrong number is —858
Right number = 783 + (9^2 – 9) = 855

S4. Ans.(a)
Sol.
Pattern is —

```
37    ┌─────┐   306     511     763    1062
      │ 148 │
      └─────┘
   111      158     205     252     299

          47      47      47      47
```

Wrong number is — 150

S5. Ans.(d)
Sol.
Pattern is —

```
4      2       3       6      16    ┌────┐
                                    │ 69 │
                                    └────┘
   ×¼+1    ×½+2    ×1+3    ×2+4   ×4+5
```
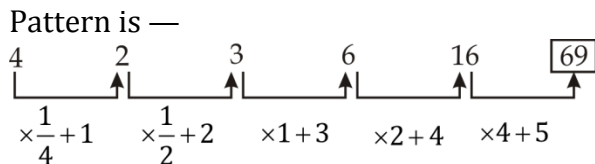
Wrong number = 70

S6. Ans.(c)
Sol.

Let cost price = 100x

Marked price = $100x \times \frac{140}{100} = 140x$

Discounted price = $140x \times \frac{80}{100} = 112x$

Selling price including tax = $112x \times \frac{105}{100}$

= 117.6x

ATQ,

17.6x = 352

⇒ x = 20

Marked price = 140 × 20 = 2800

S7. Ans.(e)

Sol. Let cost price of article A Rs. 112x and cost price of article B Rs. 135x

ATQ,

Selling price of article A

= $\frac{112x}{4} \times 5$

= 140x Rs.

Selling price of article B

= $\frac{135x}{4} \times 5$

= 168.75x Rs.

Let mark price of article A is 7y

And article B is 9y

$140x = 7y \times \left(\frac{100-d}{100}\right)$ ___(I)

$168.75x = 9y \times \left(\frac{100-(d+5)}{100}\right)$ _____(II)

From (I) and (II) _____

$\frac{140x}{168.75x} = \frac{7y \times \left(\frac{100-d}{100}\right)}{9y \times \left(\frac{95-d}{100}\right)}$

$\frac{140 \times 9}{168.75 \times 7} = \frac{100-d}{95-d}$

$\frac{16}{15} = \frac{100-d}{95-d}$

16d – 1520 = 15d – 1500

First discount d = 20%

Second discount = (20 + 5) = 25%

S8. Ans (b)

Sol. Let speed of rowing in still water be x kmph.

ATQ

$2 = \frac{21}{x-4} - \frac{21}{x+4}$

$2 = \frac{21x+84-21x+84}{x^2-16}$

$2x^2 - 32 - 168 = 0$

$x = 10$

So, speed of rowing in still water = $10 \; kmph$

S9. Ans (c)
Sol. Time required to over take the thief $= \dfrac{150}{(18-12)\times\frac{5}{18}}$
$= \dfrac{150\times3}{5}$
$= 90$ sec
In 90 sec. distance travelled by the thief $= 90 \times 12 \times \dfrac{5}{18}$
$= 300$ meters

S10. Ans. (d)
Sol.   Let the side of square field $= a$
Let the side of rectangular field $= \ell, b$
$40 \times \dfrac{3}{2} a = 3a^2, a = 20, b = 30$
Sum of cost of gravelling $= 12.5[(20)^2 + (40 \times 30)]$
$=$ Rs. 20000
Difference between cost of fencing $= 7.25\ [2(40 + 30) - 4(20)]$
$=$ Rs. 435

S11. Ans (a)
Sol. $1313 + 2121 - 1616 + 246 = ?$
$? = 2064$

S12. Ans (b)
Sol. Using formula $a^3 + b^3 = (a + b)(a^2 + b^2 - ab)$
$\dfrac{(0.673+1.327)(0.673^2+1.327^2-0.673\times1.327)}{(0.673^2+1.372^2-0.673\times1.327)} = 2^2 \times (?)^{-1}$
$2 = 4 \times (?)^{-1}$
$? = 2$

S13. Ans (e)
Sol. $\dfrac{13}{7} \times \dfrac{11}{6} \times \dfrac{9}{5} \div \dfrac{429}{70} = \dfrac{1}{5} \times ?$
$1 = \dfrac{1}{5} \times ? \to ? = 5$

S14. Ans (e)

Sol. $(8)^{0.75} \times (8^4)^{0.25} \div (64)^{-1} = (8)^?$

$(8)^{0.75} \times 8 \times \frac{1}{(64)^{-1}} = (8)^?$

$(8)^{0.75} \times 8 \times 64 = (8)^?$

$8^{3.75} = (8)^?$

$? = 3.75$

S15. Ans (a)

Sol. $\frac{9}{100} \times (936 - 336) - \frac{496}{8} + ? = 550$

$? = 550 + 62 - 54$

$? = 558$

S16. Ans.(d)

Sol.

Required No. of girls $= \left(\frac{26}{100} \times 6000 - 900\right) + 600 + \left(\frac{29}{100} \times 6000 - 1200\right)$

$= 660 + 600 + 540 = 1800$

S17. Ans.(c)

Sol.

Required Ratio = 900 : (540 – 400) : 1740

= 900 : 140 : 1740

= 90 : 14 : 174

= 45 : 7 : 87

S18. Ans.(e)

Sol. Required difference $= 1200 - \frac{6}{100} \times 6000$

= 1200 – 360 = 840

S19. Ans.(b)

Sol.

No. of girls in School E $= \frac{29}{100} \times 6000 - 1200$

= 1740 – 1200

540   = Total no. of students in school B

S20. Ans.(e)

Sol. Required % $= \frac{720-500}{540} \times 100 \approx 40\%$

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