

MATHS STRUCTURAL QUESTIONS ANSWERS

FRACTIONS

- $\frac{5}{13}, \frac{7}{18}, \frac{2}{5}, \frac{11}{25}$
- $\frac{5}{24}$
- 144 boys
- $\frac{2}{3}, \frac{19}{30}, \frac{5}{8}, \frac{3}{5}$
- 360
- Sh. 20,250
- 1008
- $\frac{2}{5}$
- 3 girls
- $\frac{5}{12}$
- $\frac{7}{10}$
- 3,800L
- 6,300 Litres
- 24 hours
- $2\frac{1}{3}$

MODE, MEAN AND MEDIAN

- 38.5
- $9\frac{1}{2}$ or 9.5
- 39kg
- 64kg
- 10
- 8
- 30
- 20 Litres
- 86
- 30
- 12
- 9
- 13
- Sh. 420
- 862

DECIMAL AND DECIMAL PLACES

- 0.006
- 1.29
- 0.53
- 10,000
- 14.5
- 0.0005
- 400.54
- 0.61
- 12
- 20.00
- 71.90
- 66.90
- 14.7732
- 8.8314
- 4.8

RATIO

- 0.8
- 5:4
- 6:5
- Sh. 12,000
- 5:4

- 8:14:21
- 75 cows and 114 goats or 189 animals
- 23:20
- 18:17
- 5:4
- 4:5
- 4:3
- 5:8
- 100kg
- 11 goats

NUMBERS

- 80, 018, 018
- Two thousand and fourteen and thirteen hundredths.
- Seven hundred thousand four hundred and five and eighteen thousandths.
- 100m
- 36m
- $2 \times 3 \times 7$
- 4104
- 2.4
- $3\frac{1}{3}$
- 0.16
- 12,662,306
- 200,002.013
- 324
- 21
- 1296m^2

LCM AND GCD

L.C.M.

- 360
- 48
- 24min
- 120
- 12
- 600
- Sh. 1000
- 40
- 40
- 276
- 1.25 p.m
- 24 cubes
- 6.72m
- 360
- 168

NUMBERS

PLACE VALUE AND TOTAL VALUE

- Thousands
- Ten thousandths
- 3
- Thousandths
- 30900
- 250
- 0.09
- 30.007
- Ten thousandths
- 10
- Millions
- Hundred thousand
- Thousand
- 7000
- 530,000

ROUNDING OFF NUMBERS AND DIVISIBILITY TESTS

1. 49000
2. 8,900,000
3. 568.8
4. 800,000
5. 879.26
6. 423,000
7. 2,000.0
8. 12.69
9. 2 and 3
10. 0
11. 0 or 5
12. 3
13. 9
14. 2
15. 11, 11
16. 3

NUMBER SEQUENCE

1. 95
2. 59
3. 75
4. 61
5. 37
6. 64
7. 22
8. 24
9. $1\frac{5}{8}$
10. 5
11. 105.3
12. 56.0
13. 3025
14. 56
15. 192

ALGEBRA

1. 30
2. 7
3. $y = 4$
4. $k = 32$
5. $n = 1$
6. $t = 13$
7. $10\frac{5}{8}$
8. $n = 11$
9. $x = 3\frac{3}{5}$
10. $p = 2$
11. $y = 4\%$
12. $t = 8$
13. $x = 71$
14. $x = 12\%$
15. $d = 12$

ALGEBRA (SUBSTITUTION)

1. 28
2. 3
3. 7
4. $1\frac{2}{3}$
5. 20
6. 3
7. 8
8. 8
9. 3
10. 4

11. 7
12. 7
13. 30
14. $1\frac{1}{4}$
15. 3

PERCENTAGE INCREASE AND DECREASE

1. 25%
2. Sh. 8,500
3. Sh. 583,200
4. 7.5 million or Sh. 7,500,000
5. 72.2kg
6. $12\frac{1}{2}\%$
7. 4%
8. $16\frac{2}{3}\%$
9. 20%
10. 7,935cm
11. Sh. 800,000
12. 55%
13. Sh. 2,250
14. 21%
15. Sh. 8,000

PROFIT AND LOSS

1. 20%
2. Sh. 26,880
3. Sh. 960
4. Sh. 40
5. Sh. 320,000
6. $8\frac{1}{2}\%$
7. Sh. 9,600
8. Sh. 440
9. Sh. 40 more
10. 5% loss
11. 25%
12. Sh. 1,125
13. Sh. 252
14. Sh. 150
15. 5%

SIMPLE INTEREST

1. Sh. 10,000
2. Sh. 20,400
3. Sh. 14,700
4. Sh. 105
5. Sh. 10,000
6. $3\frac{1}{2}$ years
7. Sh. 4,000
8. 12%
9. 9% p.a
10. 8% p.a
11. Sh. 109,080
12. Sh. 48,000
13. 11% p.a
14. 6%
15. Sh. 15,000

DISCOUNTS

1. 20%
2. $13\frac{1}{3}\%$
3. 25%
4. Sh. 2,500
5. 18 $\frac{3}{4}\%$
6. Sh. 2,380
7. Sh. 258

8. Sh. $33\frac{1}{3}\%$
9. 12%
10. Sh. 1,200
11. Sh. 232
12. Sh. 1,656
13. Sh. 13,500
14. Sh. 980
15. Sh. 5,780

COMPOUND INTEREST

1. Sh. 30,105.60
2. Sh. 77,976
3. Sh. 9,675
4. Sh. 20,886
5. Sh. 30,495
6. Sh. 43,700
7. Sh. 90,000
8. Sh. 39,560
9. Sh. 25,088
10. Sh. 20,313
11. Sh. 42,400
12. Sh. 25,000
13. Sh. 28,000
14. Sh. 35,880
15. Sh. 11,448

HIRE PURCHASE

1. Sh. 1,800
2. Sh. 16,001
3. Sh. 73,850
4. Sh. 1,260
5. Sh. 10,584
6. Sh. 61,440
7. Sh. 1,872
8. Sh. 12,000
9. Sh. 2,220
10. Sh. 2,242.50
11. Sh. 19,500
12. Sh. 2,250
13. Sh. 7,200
14. Sh. 8,850
15. Sh. 13,800

COMMISSION

1. Sh. 2,570
2. Sh. 10,400
3. Sh. 112,500
4. Sh. 30,000
5. Sh. 70,000
6. Sh. 90,000
7. Sh. 100,000
8. Sh. 8,200
9. Sh. 67,200
10. 3%
11. Sh. 13,600
12. Sh. 46,905
13. Sh. 110,000
14. $4\frac{1}{2}\%$
15. 3%

PROPORTIONS

1. 21 men
2. Sh. 4,050
3. 16 days
4. 15 days
5. 40 bags
6. 6 days

7. 27 min
8. 4hrs 54min
9. 13 days
10. 2 more hours
11. 2 men
12. 1575 packets
13. 7 more days
14. 4 more days
15. 20 workers
16. 80 days

PYTHAGOREAN RELATIONSHIP/ RIGHT ANGLES TRIANGLES

1. C
2. 6m
3. $1\frac{2}{3}m$
4. D
5. 17m
6. 20cm
7. 2.5m
8. 15cm
9. 1,700km
10. 26cm
11. 43cm
12. 50cm
13. 90m
14. 24m
15. 16m

BILLS

1. Sh. 247
2. Sh. 447
3. Sh. 361
4. Sh. 847
5. Sh. 75
6. Sh. 26,400
7. Sh. 1,112
8. Sh. 91
9. Sh. 127
10. Sh. 569
11. Sh. 156
12. Sh. 30
13. Sh. 3
14. Sh. 621
15. Sh. 84

TIME, DISTANCE AND SPEED

1. Monday 6.20a.m or 0620h
2. 2.30p.m or 1430h
3. 28km/h
4. 5.05a.m or 0505h
5. 80km/h
6. 100km/h
7. 72km/h
8. $2\frac{2}{3}m/s$
9. 400km
10. 9m/s
11. 1419h
12. 9.12p.m
13. $2\frac{1}{2}$ hours
14. 5.41p.m
15. 8.05a.m

TEMPERATURE AND CALENDAR (TIME)

1. Wednesday
2. 83°C
3. Thursday

4. 7.15 a.m
5. 58 nights
6. Wednesday
7. Friday
8. 7.54 a.m
9. 47°C
10. 19°C
11. 38°C
12. Friday
13. 80°C
14. 40°C
15. 68 nights

GEOMETRY: ANGLES

1. $y = 85^\circ$
2. $x = 80^\circ$
3. D
4. 121°
5. 360°
6. B
7. 120°
8. 47°
9. 51°
10. 24°
11. $x = 66^\circ$
12. 80°
13. 88°
14. 62°
15. 64°

STACKS OF CUBES

1. 200
2. 10
3. 180
4. 28
5. 36
6. 6
7. 16
8. 12
9. 90
10. 84
11. 12 faces
12. 33
13. 120
14. 54
15. 94

PIE CHARTS

1. 80
2. Sh. 896
3. Sh. 3,840
4. 90%
5. Sh. 60,000
6. D
7. 280
8. 592
9. 10%
10. 18
11. 72%
12. 125,084
13. Sh. 90,000
14. 84°
15. 65°

SCALE DRAWING

1. 2,000ha
2. 1:600000
3. 10.8km

4. 96 ares
5. 1:12,000,000
6. 1.92cm^2
7. 1:50,000
8. 2cm
9. 1:250,000
10. 1:300,000
11. 1:550,000
12. 7,200 ha
13. $14\frac{1}{4}\text{cm}^2$ or 14.25cm^2
14. 12.96ha
15. 10.5 ha

WEIGHT

1. 9,600
2. 3.14 tonnes
3. 16.75 tonnes
4. 2,000
5. 200 cartons
6. 850 packets
7. 480g
8. 2.75 tonnes
9. 12 packets
10. $11\frac{3}{4}$ tonnes or 11.75 tonnes
11. 210 pkts
12. 3 tonnes
13. 1950
14. 4,000
15. 1.695 tonnes

POSTAL CHARGES

1. sh. 37.50
2. sh. 690
3. sh. 4,404
4. sh. 3,765
5. sh. 34.30
6. sh. 40.40
7. sh. 237
8. sh. 12
9. sh. 18.10
10. sh. 30.00
11. sh. 119
12. sh. 6
13. sh. 353
14. C
15. sh. 281

AREA, PERIMETER AND CIRCUMFERENCE

1. 728cm^2
2. 256cm
3. 1323cm^2
4. 243cm
5. 19.8m^2
6. $1,550.5\text{m}^2$
7. 25cm^2
8. 156cm
9. 2776cm^2
10. 157cm^2
11. 672cm^2
12. 172cm
13. 42m
14. 3936cm^2
15. 200cm

VOLUME AND CAPACITY

1. $187,200\text{cm}^3$
2. 4.2m
3. 369cm^3
4. 3m

MATHS STRUCTURAL QUESTIONS ANSWERS

BAR GRAPHS

1. C
2. 1cm represents 10 litres
3. 74 litres
4. 540 bags
5. Thursday
6. 97 litres
7. 50 pupils
8. Sh. 28,160
9. Sh. 1,760
10. 80%
11. B
12. D
13. 197
14. Two
15. 30 eggs

CONSTRUCTION

1. 5.5cm
2. 75°
3. 6cm
4. 7.9cm
5. 1.8cm
6. 6.3cm
7. C
8. 9.3cm
9. 116°
10. A
11. 8.9cm
12. 7.8cm
13. 2cm
14. 5cm
15. Line nt and line EF

ALGEBRA (INEQUALITIES)

1. $y < 4\frac{2}{11}$
2. $x > 1\frac{1}{8}$
3. $x > \frac{3}{11}$
4. $m > 5\frac{3}{4}$
5. $t < 15$
6. $y > 18$
7. $n < 8$
8. $f > 37$
9. $x < 45$
10. D
11. $x < 2\frac{2}{5}$
12. $y < 60$
13. $n > 2\frac{1}{12}$
14. $y < 1\frac{7}{11}$
15. $p < 30$

ALGEBRA (FORMING EQUATIONS)

1. $3k + 1 = 64$
2. $9c - 20 = 250$
3. $9x - 20 = 70$
4. $(2\frac{1}{3}k + 40)$
5. $2\frac{1}{4}k - 50 = 400$
6. $2\frac{1}{4}x + 25 = 115$
7. $5t - 56 = 104$
8. $8p + 48 = 112$

9. $2\frac{1}{3}f - 10 = 200$
10. $3y - 5 = 7$
11. $4p + 4$
12. $(10k + 54 = 104)$
13. $(3b + 10 = 640)$
14. $(2t - m + 16)$
15. $(n + \frac{1}{4}n = 15)$

BODMAS

1. $3\frac{1}{2}$
2. 512
3. $1\frac{5}{28}$
4. 556
5. $1\frac{16}{25}$
6. 84
7. 25
8. 21.56
9. $\frac{20}{59}$
10. 70
11. 62
12. 62
13. 106
14. $\frac{23}{30}$
15. 9
16. 9

TABLES AND INTERPRETATION

1. 87 pts
2. 319km
3. Sh. 1,575
4. 76
5. Friday
6. 240
7. 102 notes
8. Sh. 6,600
9. 5,688
10. 22kg
11. 2,370
12. Sh. 1,895
13. Sh. 2,340
14. Sh. 1,050
15. 28

GRAPHS - LINE GRAPHS

1. C
2. Between A and B
3. 125km/h
4. D
5. 50km
6. Vertical scale : 1cm Rep 25km
Horizontal scale : 1cm Rep 30 minutes
7. B
8. 75km/h
9. Between town C and D
10. 375 litres
11. 9 a.m
12. $13\frac{1}{3} \text{ km/h}$
13. 150km
14. 20km
15. 54 minutes