Directions (Q. 1 - 50): What approximate value should come in the place of question mark (?) in the following questions?

1) \( \frac{2}{3} \% \) of 699 – 24 \% of 1548 – (11/17) of \( \frac{35}{18} \) of 71 = 30
a) 70  
b) 90  
c) 50  
d) 110  
e) 140

2) 15 \frac{11}{12} \% \text{ of } 298 + (3/11) \text{ of } 51644 + (14.21)^2 = ?
a) 15120  
b) 18560  
c) 11440  
d) 12750  
e) 14330

3) 35 \times 55 \div 8 – 26 \% \text{ of } 689 + 9 = ? - (11479 \div 7)
   a) 5280  
   b) 4140  
   c) 2430  
   d) 3370  
   e) 4560

4) \( \frac{3374}{125.13} \frac{1}{3} \) + (362 \div 11) = ? – 27.79
   a) 13  
   b) 8  
   c) 16  
   d) 21  
   e) 23

5) ? – (11.13)^2 \div 363 \times 121 + (7.1)^3 = 16 \% \text{ of } 249 + (5669 \div 7)
   a) 430  
   b) 370  
   c) 620  
   d) 550  
   e) 680

6) ? = (4128 + 574) \div 25 + (18.23)^2 + (2/15) of 12524 – 24
   a) 2540  
   b) 3120  
   c) 2160  
   d) 3480  
   e) 3950

7) 1399.99 \div 20.21 = ? + 425.5 - (310 \div 6 \times 20.3)
   a) 750  
   b) 520  
   c) 840  
   d) 430  
   e) 680

8) 21.85 \times 5.18 + (64.13)^2 \div 15.91 = ? - 28 \% \text{ of } 899
   a) 560  
   b) 620  
   c) 750  
   d) 440  
   e) 800

9) 52 \% \text{ of } 2149 + (18.13)^2 \div 12 \times 3 + (23.2)^2 = 3.9 \times ?
   a) 565  
   b) 520  
   c) 470  
   d) 430  
   e) 600

10) (22/13) \div (155/258) \times 517 = ? – (12.11)^3
    a) 4850  
    b) 3210  
    c) 4670  
    d) 4150  
    e) 3690

11) 15 \frac{7}{8} + 23 \frac{1}{3} – 8 \frac{1}{7} + 1 \frac{3}{4} = ? + 5 \frac{5}{7}
    a) 44  
    b) 38
c) 15
d) 32
e) 27

12) \(34478 \div 8 + (3/13) \text{ of } 12154 + 30 \% \text{ of } 599 = ?^2 - 274\)
a) 93
b) 74
c) 87
d) 68
e) 82

13) \(\sqrt{21609} \div 7.12 \times 15.21 = ? - 16759 \div 9\)
a) 2850
b) 3435
c) 2180
d) 1965
e) 1350

14) \(34484 \div 11 + (5/9) \text{ of } 12149 + 56 \% \text{ of } 8978 = ?^2 - 451.32\)
a) 118
b) 132
c) 136
d) 130
e) 124

15) \((17.77)^2 - (7/4) \times 36 \div 9 + (3.12)^3 = ? + (11.13)^2\)
a) 185
b) 223
c) 162
d) 157
e) 140

16) \((24.32)^2 \div (4.05)^2 \times 120.11 \div 10.13 = ? - 551 \div 3.98\)
a) 480
b) 1250
c) 570
d) 760
e) 1020

17) \((3.1/6.78) \text{ of } 246 \times 135 \div 15.12 - ? = 527.68 \div 3 + 217\)
a) 478
b) 552
c) 256
d) 384
e) 610

18) \((32.1/113) \text{ of } 904.21 \% \text{ of } (99.6/31.7) \text{ of } ? = 63.56\)
a) 15
b) 22
c) 35
d) 8
e) 40

19) \((3.2/7) \text{ of } 348 + (5/7) \text{ of } (21.2/14.8) \text{ of } 1897 = ? \% \text{ of } 499\)
a) 410
b) 560
c) 470
d) 500
e) 320

20) \(289.995 \times 19.899 \div 4.003 + 34.078 = ?\)
a) 1484
b) 1678
c) 1298
d) 1564
e) 1236

21) \(79.989 \% \text{ of } 599.99 + 32.99 \% \text{ of } 400.009 - 48.065 \% \text{ of } 149.98 = ?\)
a) 580
b) 520
c) 540
d) 560
e) 640

22) \(\sqrt{4760.998} \times 2.995 + 49.98 \% \text{ of } 25.909 + 15.086 \times 1.9998 = ?\)
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| 23) \(45.098 \times 5.998 + 72.002 \div 7.990 + 2.999 \times 6.999 = ?\) | a) 300  
b) 340  
c) 380  
d) 420  
e) 280 |
| 24) \(9.999 + 99.999 + 999.9998 + 9999.9997 = ?\) | a) 11110  
b) 11000  
c) 12100  
d) 11500  
e) 15110 |
| 25) \(79.907 \times 5.076 + 119.998 \% \text{ of } 720.08 - 451.09 \times 1.998 = ?\) | a) 362  
b) 289  
c) 338  
d) 376  
e) 412 |
| 26) \(171.995 \times 14.998 \div 25.045 + 10.998 \times 11.006 = ?\) | a) 284  
b) 264  
c) 224  
d) 274  
e) 296 |
| 27) \(19.99 \% \text{ of } 25501 + \sqrt{9410} \times 2.904 - \sqrt{4760} = ?\) | a) 5140  
b) 5460  
c) 5690  
d) 5320  
e) 5260 |

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| 28) \((25.01)^2 + (15.99)^2 - 39.908 \% \text{ of } 779.90 = ?\) | a) 550  
b) 570  
c) 580  
d) 600  
e) 520 |
| 29) \(12.98 \times 7.98 - 45.99 \times 5.04 + 659.90 = ?\) | a) 534  
b) 584  
c) 524  
d) 514  
e) 628 |
| 30) \((52.13)^2 \div 13.9 \times 7.2 + (44.78)^2 = 5 \times ? \div 35 \% \text{ of } 3097\) | a) 892  
b) 716  
c) 954  
d) 1028  
e) 1150 |
| 31) \(11 \frac{4}{5} \% \text{ of } 1499 + 5 \frac{2}{3} \% \text{ of } 2949 = ?\) | a) 564  
b) 678  
c) 252  
d) 357  
e) 423 |
| 32) \((\frac{4}{9}) \text{ of } 1223 = ? - 27.4 \times 12.78 \div 38.89\) | a) 420  
b) 646  
c) 553  
d) 395  
e) 712 |
| 33) \(13.9 \% \text{ of } 742 - ? \% \text{ of } 393 = 89.78 - (12.23)^2\) | a) 56  
b) 28  
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<table>
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<tr>
<td>c) 62</td>
<td>d) 77</td>
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<tr>
<td>34) ((1023.77)^2 \div (255.89)^{3/2} \times 64.12 = (3.92)^4 \times 4^2)</td>
<td>a) 3</td>
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<td>c) 9</td>
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<tr>
<td>35) ((32/7) \times [8955.21 - 2368.13] + 234.5 = ? + 3429.87)</td>
<td>a) 31560</td>
</tr>
<tr>
<td>36) (24 % \text{ of } 849 + 56 % \text{ of } 1299 - 456.23 \div 4 = ? + (8.11)^2)</td>
<td>a) 686</td>
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<td>c) 575</td>
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<td>37) (17 % \text{ of } ? - 2054 \div 12.78 - 222 \div 3.01 = 57)</td>
<td>a) 1700</td>
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<td>c) 2200</td>
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<td>38) (5 \frac{1}{4} + 3 \frac{5}{8} - 4 \frac{2}{3} + 2 \frac{1}{2} = ? - 4 \frac{3}{4})</td>
<td>a) 20</td>
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<td>c) 24</td>
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<tr>
<td>39) ([(46.04)^2 \div 23 \times 6.11] \div 12 = 2.99 \times ? - 788 \div 3)</td>
<td>a) 158</td>
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<td>c) 215</td>
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<tr>
<td>40) (49.21 \times 19.89 - 24.98 \times 14.12 = (36 + ?) \times 9)</td>
<td>a) 22</td>
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<td>c) 58</td>
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<tr>
<td>41) (35 % \text{ of } 1593 + 29 % \text{ of } 4506 = ? \times 41 + 468 + 773.89 - 199.78)</td>
<td>a) 28</td>
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<td>c) 32</td>
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<tr>
<td>42) ((63.89)^2 \times (64.12)^{1/3} \times (25.99)^2 \div (2^{11} \times (12.77)^2) = 2^x)</td>
<td>a) 6</td>
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<td>c) 5</td>
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<tr>
<td>43) ((1782 \div 11.98) \div 2.92 \times 35.89 + 25 % \text{ of } 541 - 67 % \text{ of } 1299 = ?)</td>
<td>a) 1046</td>
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<td>c) 982</td>
</tr>
<tr>
<td>44) ((12.32)^2 \div (3.15)^2 \times 80.11 \div 10.23 = ? - 411 \div 4.11)</td>
<td>a) 230</td>
</tr>
</tbody>
</table>
45) \( (4.3 / 6.78) \) of \( 48.7 \times 15 \div 5.12 + ? = 129.68 \)

- a) 66
- b) 28
- c) 82
- d) 46
- e) 74

46) \( \sqrt{1291} \times 24.91 \div 15.11 = ? - (8.11)^2 \)

- a) 138
- b) 124
- c) 152
- d) 166
- e) 110

47) \( (2 / 7) \) of \( (21.2 / 13.8) \) of 188 = ? \% of 299

- a) 24
- b) 29
- c) 27
- d) 32
- e) 35

48) 120.05 + 419.728 \div 6 - 179.21 = \sqrt{?}?

- a) 1331
- b) 1728
- c) 2197
- d) 2744
- e) 1587

49) 72.124 \% of 249.998 + ? \% of 500.215 = 600.234

- a) 105
- b) 112
- c) 143
- d) 84
- e) 152

50) \( (5/7) \) of \( 167.98 \times 25.12 \div 5 + ? = 765.112 \)
6) Answer: c)
\[
? = (4128 + 574) ÷ 25 + (18.23)^2 + (2/15) of 12525 - 24
\]
\[
= (4702/25) + 324 + 1670 - 24
\]
\[
x = 2158 = 2160
\]
7) Answer: e)
\[
1399.99 ÷ 20.21 = ? + 425.5 - (310 ÷ 6 × 20.3)
\]
\[
= (1400/20) = x + 426 - (312/6) * 20
\]
\[
70 - 426 + 1040 = x
\]
\[
x = 684 = 680
\]
8) Answer: b)
\[
21.85 × 5.18 + (64.13)^2 ÷ 15.91 = ? - 28 % of 899
\]
\[
= (22 * 5) + 64^2 ÷ 16 = x - (28/100) * 900
\]
\[
= 110 + (64 * 64)/16 = x - 252
\]
\[
= 110 + 256 + 252 = x
\]
\[
x = 618 = 620
\]
9) Answer: d)
\[
52 % of 2149 + (18.13)^2 ÷ 12 × 3 + (23.2)^2 = 3.9 x
\]
\[
= (52/100) * 2150 + (18 * 18 * 3)/12 + 23^2 = 4x
\]
\[
1118 + 81 + 529 = 4x
\]
\[
1728 = 4x
\]
\[
x = 432 = 430
\]
10) Answer: b)
\[
(22/13) ÷ (155/258) × 517 = ? - (12.11)^3
\]
\[
(22/13) * (260/154) * 518 = x - 1728
\]
\[
1480 + 1728 = x
\]
\[
x = 3208 = 3210
\]
11) Answer: e)
\[
15 7/8 + 23 1/3 - 8 1/7 + 1 ¾ = x + 5 5/7
\]
\[
16 + 23 - 8 + 2 - 6 = x
\]
\[
x = 27
\]
17) Answer: b) 
\[(3.1/6.78) \times 246 \div 15.12 - ? = 527.68 \div 3 + 217\]
\[(3/7) \times 245 \times (135/15) + x = (528/3) + 217\]
\[945 - x = 176 + 217\]
\[x = 945 - 176 - 217\]
\[x = 552\]

18) Answer: d) 
\[(32.1/113) \times 904.21 \times (99.6/31.7) \times ? = 63.56\]
\[(32/113) \times (904/100) \times (100/32) \times x = 64\]
\[x = 8\]

19) Answer: a) 
\[(3.2/7) \times 348 + (5/7) \times (21.2/14.8) \times 1897 = ? \% \times 499\]
\[(3/7) \times 350 + (5/7) \times (21/15) \times 1900 = (x/100) \times 500\]
\[150 + 1900 = 5x\]
\[2050 = 5x\]
\[x = 2050/5 = 410\]

20) Answer: a) 
\[289.995 \times 19.899 \div 4.003 + 34.078 = x\]
\[290 \times 20 \div 4 + 34 = x\]
\[1484 = x\]

21) Answer: c) 
\[79.989 \% \times 599.99 + 32.99 \% \times 400.009 - 48.065 \% \times 149.98 = x\]
\[80/100 \times 600 + 33/100 \times 400 - 48/100 \times 150 = x\]
\[480 + 132 - 72 = x\]
\[540 = x\]

22) Answer: b) 
\[\sqrt{4760.998 \times 2.995} + 49.98 \% \times 25.909 + 15.086 \times 1.9998 = x\]
\[\sqrt{4761} \times 3 + 50/100 \times 26 + 15 \times 2 = x\]
\[69 \times 3 + 13 + 30 = x\]

23) Answer: a) 
\[45.098 \times 5.997 + 72.002 \div 7.990 + 2.999 \times 6.999 = x\]
\[45 \times 6 + 72 / 8 + 3 \times 7 = x\]
\[270 + 9 + 21 = x\]
\[300 = x\]

24) Answer: a) 
\[9.999 + 99.999 + 999.9998 + 9999.9997 = x\]
\[10 + 100 + 1000 + 10000 = x\]
\[11110 = x\]

25) Answer: a) 
\[79.907 \times 5.076 + 119.998 \% \times 720.08 - 451.09 \times 1.998 = x\]
\[80 \times 5 + (120/100) \times 720 - (451 \times 2) = x\]
\[400 + 864 - 902 = x\]
\[362 = x\]

26) Answer: c) 
\[171.995 \times 14.998 \div 25.045 + 10.998 \times 11.006 = x\]
\[(172 \times 15) / 25 + (11 \times 11) = x\]
\[103 + 121 = x\]
\[224 = x\]

27) Answer: d) 
\[19.99 \% \times 25501 + \sqrt{9410 \times 2.904} - \sqrt{4760} = x\]
\[20 \% \times 25500 + \sqrt{9409 \times 3} - \sqrt{4761} = x\]
\[(20/100) \times 25500 + 97 \times 3 - 69 = x\]
\[5100 + 291 - 69 = x\]
\[5322 = x\]

28) Answer: b) 
\[(25.01)^2 + (15.99)^2 - 39.908 \% \times 779.90 = x\]
\[25^2 + 16^2 - (40/100) \times 780 = x\]
\[625 + 256 - 312 = x\]
\[569 = x\]

29) Answer: a)
12.98 \times 7.98 - 45.99 \times 5.04 + 659.90 = x
13 \times 8 - 46 \times 5 + 660 = x
104 - 230 + 660 = x
534 = x

30) Answer: a)
(52.13)^2 \div 13.9 \times 7.2 + (44.78)^2 = 5 \times ? - 35 \% of 3097
52^2 \div 14 \times 7 + 45^2 = 5x - 35 \% of 3100
1352 + 2025 + 1085 = 5x
5x = 4462
x = 892.4 = 892

31) Answer: d)
11 \frac{4}{5} \% of 1499 + 5 \frac{2}{3} \% of 2949 = ?
12 \% of 1500 + 6 \% of 2950 = x
x = 180 + 177 = 357

32) Answer: c)
(4/9) of 1223 = ? - 27.4 \times 12.78 \div 38.89
(4/9) \times 1224 = x - (27 \times 13)/39
544 + 9 = x
x = 553

33) Answer: e)
13.9 \% of 742 - ? \% of 393 = 89.78 - (12.23)^2
14 \% of 750 - x \% of 400 = 90 - (12)^2
105 - 90 + 144 = 4x
159/4 = x
x = 40

34) Answer: a)
(1023.77)^2 \div (255.89)^{3/2} \times 64.12 = (3.92)^4 \times 4^2
(1024)^2 \div (256)^{3/2} \times 64 = 4^4 \times 4^x
(4^3)^2 \div (4^3)^{3/2} \times 4^3 = 4^4 \times 4^x
4^{10} \div 4^6 \times 4^3 = 4^4 \times 4^x
4^{10-6+3-4} = 4^x
4^3 = 4^x
x = 3

35) Answer: c)
(32/7) of [8955.21 - 2368.13] + 234.5 = ? + 3429.87
(32/7) of [8955 - 2368] + 235 = x + 3430
(32/7) \times (6587) + 235 - 3430 = x
x = 30112 + 235 - 3430 = 26917
x = 26920

36) Answer: e)
24 \% of 849 + 56 \% of 1299 - 456.23 \div 4 = ? + (8.11)^2
24 \% of 850 + 56 \% of 1300 - 456 \div 4 = x + 8^2
204 + 728 - 114 - 64 = x
x = 754

37) Answer: a)
17 \% of ? - 2054 \div 12.78 - 222 \div 3.01 = 57
(17/100) \times x - (2054/13) - (222/3) = 57
(17/100) \times x = 57 + 158 + 74
(17/100) \times x = 289
x = 1700

38) Answer: d)
5 \frac{1}{4} + 3 \frac{5}{8} - 4 \frac{2}{3} + 2 \frac{1}{2} + 4 \frac{3}{4} = x
x = 5 + 4 - 5 + 3 + 5 = 12

39) Answer: b)
[(46.04)^2 \div 23 \times 6.11] \div 12 = 2.99 \times ? - 788 \div 3
[(46)^2 \div 23 \times 6] \div 12 = 3x + 789 \div 3
46 + 263 = 3x
3x = 309
x = 103

40) Answer: d)
49.21 \times 19.89 - 24.98 \times 14.12 = (36 + ?) \times 9
49 \times 20 - 25 \times 14 = (36 + x) \times 9
980 - 350 = 324 + 9x
9x = 306
x = 34

41) Answer: b)
35 \% of 1593 + 29 \% of 4506 = ? \times 41 + 468 + 773.89 - 199.78
(35/100) * 1600 + (29/100) * 4500 = 41x + 468 + 774 - 200
560 + 1305 - 468 - 774 + 200 = 41x
823 = 41x
x = 820/41 = 20

42) Answer: c)
(63.89)² × (64.12)¹/³ × (25.99)² ÷ (2¹¹ × (12.77)²) = 2x
(64 × 64 × 4 × 26 × 26) / (2¹¹ × 13 × 13) = 2x
(2⁶ × 2⁶ × 2⁶)/ 2¹¹ = 2x
2⁶ + 6 + 4 - 11 = 2x
2² = 2x
x = 5

43) Answer: a)
(1782 ÷ 11.98) ÷ 2.92 × 35.89 ÷ 25% of 541 – 67 % of 1299 = ?
(1782/12) × (1/3) × 36 + (25/100) × 540 – (67/100) × 1300 = x
1782 + 135 – 871 = x
x = 1046

44) Answer: a)
(12.32)² ÷ (3.15)² × 80.11 ÷ 10.23 = ? - 411 ÷ 4.11
(12)² ÷ (3)² ÷ 80 ÷ 10 = x – 412 ÷ 4
128 = x – 103
x = 128 + 103 = 231
x = 230

45) Answer: d)
(4.3 / 6.78) of 48.7 × 15 ÷ 5.12 + ? = 129.68
(4 / 7) * 49 × (15 / 5) + x = 130
84 + x = 130

46) Answer: b)
\sqrt{1291} \times 24.91 ÷ 15.11 = ? - (8.11)²
\sqrt{1296} ÷ 25 ÷ 15 = x - 8²
(36 * 25) / 15 = x – 64
60 + 64 = x
x = 124

47) Answer: c)
(2 / 7) of (21.2 / 13.8) of 188 = ? % of 299
(2 / 7) * (21 / 14) * 189 = (x / 100) * 300
81 = 3x
x = 81/3 = 27

48) Answer: a)
120.05 + 419.728 ÷ 6 - 179.21 = \sqrt{?}?
120 + (420/6) – 179 = \sqrt{x}
120 + 70 – 179 = \sqrt{x}
11 = \sqrt{x}
x = 11³ = 1331

49) Answer: d)
72.124 % of 249.998 + ? % of 500.215 = 600.234
72 % of 250 + x % of 500 = 600
180 + 5x = 600
5x = 420
x = 84

50) Answer: a)
(5/7) of 167.98 \times 25.12 ÷ 5 + ? = 765.112
(5/7) * 168 * (25/5) + x = 765
600 + x = 765
x = 765 – 600 = 165