

Answer key

English Blog - 7

PQ HUNT

1. reads
2. written
3. have known
4. you been waiting
5. belongs
6. has
7. goes
8. have just cleaned
9. since
10. for
11. get up
12. has been working
13. is doing
14. have been living
15. is raining
16. think

17. revolves
18. goes
19. goes
20. writes

Check your ability

1. does
2. freezes
3. is sleeping
4. is raining
5. have been waiting
6. has been raining
7. have left
8. have vacated
9. causes
10. walk

Use since or for

1. for
2. since
3. for
4. for
5. since
6. since

ശബരിതം ലളിതം - 7

PQ HUNT

1) 7^5

$$\frac{a^m}{a^n} = a^{m-n}$$

$$\frac{(7^6)^2}{7^7} = \frac{7^{12}}{7^7} = 7^{12-7} = 7^5$$

2. 10^{16}

$$\frac{10^8}{10^{-8}} = 10^{8+8} \\ = 10^{16}$$

3. 1

$$a^m \times a^n = a^{m+n}$$

$$3^2 \times 3^3 = 3^5$$

$$\frac{3^5}{3^5} = 1$$

4. 71

$$\frac{2^5 \times 3^2 - 2^2}{2^2 \times 2^0} \\ = \frac{2^2 (2^3 \times 3^2 - 1)}{2^2 \times 1} \\ = 2^3 \times 3^2 - 1 \\ = 8 \times 9 - 1 \\ = 71$$

5. 6

$$(4)^3 = (2)^p$$

$$(2^2)^3 = 2^p$$

$$2^6 = 2^p$$

$$p = 6$$

6. 3

$$(0.2)^x = 0.008 \quad 0.008 = (0.2)^3$$

$$x = 3$$

7. 1

$$3^{-2} \times (-3)^2 = \frac{1}{3^2} \times -3 \times -3$$

$$= 1/9 \times 9$$

$$= 1$$

8. $\frac{1}{2^8}$

$$2^1 \div 2^3 \div 2^3 \div 2^3 = \frac{2}{2^3 \times 2^3 \times 2^3}$$

$$= \frac{2}{2^{3+3+3}}$$

$$= \frac{2^1}{2^9}$$

$$= 2^{1-9}$$

$$= 2^{-8}$$

$$= \frac{1}{2^8}$$

9. 2^{49}

$$\frac{2^{50}}{2}$$

$$= 2^{50-1}$$

$$= 2^{49}$$

10. -1

$$(-1)^{\text{even no.}} = 1$$

$$(-1)^{\text{odd no.}} = -1$$

$$(-1)^{99} = -1$$

11. 10^3

$$12^3 = 12 \times 12 \times 12$$

$$= 1728$$

$$12^3 + 1^3 = 1728 + 1$$

$$= 1729$$

$$9^3 + x = 1729$$

$$x = 1729 - 729$$

$$= 1000$$

$$= 10^3$$

12. 1

$$(x^0)^{432} = 1$$

13. 900

$$10^2 + x = 1000$$

$$x = 1000 - 100$$

$$= 900$$

14. 64

$$4^5 = 1024$$

$$4^{n-2} = 4^3$$

$$= 64$$

$$\begin{array}{r} 4 \overline{)1024} \\ 4 \overline{)256} \\ 4 \overline{)64} \\ 4 \overline{)16} \\ \underline{4} \end{array}$$

15. 0

$$1 + -1 = 0$$

16. 10

$$(2^p)^2 = 2^{20}$$

$$2^{2p} = 2^{20}$$

$$2p = 20$$

$$p = 10$$

17. 2^{15}

$$\frac{2^{16}}{2^1} = 2^{16-1}$$

$$= 2^{15}$$

18. 20

$$64 = 2^6$$

$$2^{2 \times 3} = 64$$

$$n = 3$$

$$(2^{n+1} + 4) = 2^4 + 4$$

$$= 16 + 4$$

$$= 20$$

19. 10

$$(\sqrt{10})^2 = \sqrt{10} \times \sqrt{10}$$

$$= 10$$

20) 7

$$x + \frac{1}{x} = 3$$

$$x^2 + \frac{1}{x^2} = 3^2 - 2$$

$$= 9 - 2$$

$$= 7$$

21. 1

$$= \frac{8x^7}{4x^3} \div 2x^4$$

$$= 2x^4 \times \frac{1}{2x^4}$$

$$= 1$$

22. 18

$$a^{1/3} = \sqrt[3]{a}$$

$$a^{1/2} = \sqrt{a}$$

$$(144)^{1/2} + (216)^{1/3} = \sqrt{144} + \sqrt[3]{216}$$

$$= 12 + 6$$

$$= 18$$

23. 3/2

$$\sqrt{64} = 8$$

$$= 2^3$$

$$2^3 = 4^n$$

$$2^3 = 2^{2n}$$

$$2n = 3$$

$$n = 3/2$$

24. 8

$$\sqrt{3^n} = 81$$

$$3^n = 81 \times 81$$

$$= 3^4 \times 3^4$$

$$= 3^8$$

$$n = 8$$

25. 1/5

$$10^{2y} = 5^2$$

$$10^y = 5$$

$$10^{-y} = 1/5$$

26) 32

$$= 2^{0+3+2}$$

$$= 2^5$$

$$= 32$$

27. 1

$$(3-4 + 7)^0 = 1 \quad (a^0=1)$$

28. 1/3

$$\frac{9^2 \times 27^2 \times 3}{12}$$

$$= \frac{(3^2)^2 \times (3^3)^2 \times 3}{3^{12}}$$

$$= \frac{3^4 \times 3^6 \times 3}{3^{12}}$$

$$= \frac{3^{4+6+1}}{3^{12}}$$

$$= \frac{3^{11}}{3^{12}}$$

$$= 3^{11-12} = 3^{-1}$$

$$= 1/3$$

29) 4 1/4

$$x^x + y^y = 2^2 + (-2)^{-2}$$

$$= 2^2 + \frac{1}{(-2)^2}$$

$$= 4 + \frac{1}{4}$$

$$= 4 \frac{1}{4}$$

30) 17/16

$$\left(\frac{3}{6}\right)^3 - \left(\frac{1}{2}\right)^4 - (-1)^{289}$$

$$= \left(\frac{1}{2}\right)^3 - \left(\frac{1}{2}\right)^4 - -1$$

$$= \frac{1}{8} - \frac{1}{16} + 1$$

$$= \frac{2-1+16}{16}$$

$$= \frac{17}{16}$$

31. 1

32) 6

$$3^x = 729$$

$$3^x = 3^6$$

$$x = 6$$

33) 4³⁹

$$4^{40} \times \frac{1}{4} = \frac{4^{40}}{4}$$

$$= \frac{4^{40}}{4^1}$$

$$= 4^{40-1}$$

$$= 4^{39}$$

34. 4¹¹

$$4^5 \times (4^3)^2 = 4^5 \times 4^6 = 4^{11}$$

Are you Intelligent

1. $\frac{1}{x^3 y^2}$

$$\begin{aligned} (x^2 y^{4/3})^{-3/2} &= x^{2 \times -3/2} \times y^{4/3 \times -3/2} \\ &= x^{-3} \times y^{-2} \\ &= \frac{1}{x^3 y^2} \end{aligned}$$

2. $7/2$

$$\begin{aligned} 32 \times 32 \times 32 \times 32 &= 4 \times 32 \\ &= 2^2 \times 2^5 \\ &= 2^7 \end{aligned}$$

ഇവിടെ , $2^7 = 4^x$
 $2^7 = (2^2)^x$
 $2^7 = 2^{2x}$
 $2x = 7$
 $x = 7/2$

3. $1/3^8$

$$\begin{aligned} \frac{(3^2)^2 \times (3^0)^4}{(27)^4} \\ = \frac{3^4 \times 1}{3^{12}} = \frac{1}{3^8} \end{aligned}$$

4. 200^{50}

$$\begin{aligned} \boxed{a^n \times b^n = (ab)^n} \\ \frac{100^{100}}{50^{50}} = \frac{(2 \times 50)^{100}}{50^{50}} = \frac{2^{100} \times 50^{100}}{50^{50}} \\ = 2^{100} \times 50^{100-50} \\ = 2^{50} \times 2^{50} \times 50^{50} \\ = (2 \times 2 \times 50)^{50} \\ = 200^{50} \end{aligned}$$

5. 2^{99}

$$\begin{aligned} 2^{101} - 2^{100} - 2^{99} \\ = 2^{99} (2^2 - 2^1 - 2^0) \\ = 2^{99} (4 - 2 - 1) \\ = 2^{99} \times 1 = 2^{99} \end{aligned}$$

6. 5^{18}

$$\begin{aligned} \boxed{[(a^m)^n]^p = a^{mnp}} \\ [(5^2)^3]^3 = 5^{2 \times 3 \times 3} \\ = 5^{18} \end{aligned}$$

7. $\frac{x+y}{y}$

$$\begin{aligned} \frac{x^2}{y^2} - 1 \div \frac{x}{y} - 1 \\ = \frac{x^2 - y^2}{y^2} \times \frac{y}{x-y} \\ = \frac{(x+y)(x-y)}{y(x-y)} \\ = \frac{x+y}{y} \end{aligned}$$

8. $\frac{3}{25}$

$$\begin{aligned} &= 3 \times 2^2 \times 5^{-2} \times 2^{-2} \\ &= \frac{3 \times 2^2}{5^2 \times 2^2} \\ &= \frac{3}{25} \end{aligned}$$

മധുരം മലയാളം - 7

PQ HUNT

1. കവയിത്രി
2. മഹത്ത് +ചരിതം
3. പിപാസ
4. അയയ്ക്കപ്പെടൽ
5. ഉർവ്വരം
6. ഏറെചുരുക്കുക
7. കൺമണി
8. ഉത്തമപുരുഷൻ
9. എഴുത്തച്ഛൻ
10. ചെറുശ്ശേരി
11. പുത്താനം
12. വൈക്കം മുഹമ്മദ് ബഷീർ
13. ബാലാമണിയമ്മ
14. കുന്ദലത
15. അരനാഴികനേരം
16. ചതുരമനോൻ
17. ആനന്ദ്
18. പി.കുഞ്ഞനന്തൻ നായർ
19. ഇടശ്ശേരി
20. എസ്.കെ.പൊറ്റക്കാട്
21. കേരള സാഹിത്യ ചരിത്രം
22. സക്കറിയ
23. ഉണ്ണുനീലി സന്ദേശം
24. അറബിപൊന്ന്
25. ദൈവത്തിന്റെ വികൃതികൾ
26. സംക്ഷേപ വേദാർത്ഥം
27. വൈലോപ്പിള്ളി ശ്രീധരമനോൻ
28. ഇ.വി കൃഷ്ണപിള്ള