1. If $\left(x+\frac{1}{x}\right)=8$, find the value of $\left(x^2+\frac{1}{x^2}\right)$

(i) 62 (ii) 64 (iii) 63 (iv) 59 (v) 61

2. If $\left(x+\frac{1}{x}\right)=8$, find the value of $\left(x^4+\frac{1}{x^4}\right)$

(i) 3841 (ii) 3842 (iii) 3843 (iv) 3844 (v) 3840

3. If $\left(x-\frac{1}{x}\right)=2$, find the value of $\left(x^2+\frac{1}{x^2}\right)$

(i) 6 (ii) 8 (iii) 4 (iv) 7 (v) 5

4. If $\left(x-\frac{1}{x}\right)=2$, find the value of $\left(x^4+\frac{1}{x^4}\right)$

(i) 32 (ii) 37 (iii) 35 (iv) 33 (v) 34

5. If $\left(x^2+\frac{1}{x^2}\right)=79$, find the value of $\left(x+\frac{1}{x}\right)$

(i) 9 (ii) 12 (iii) 10 (iv) 8 (v) 6

6. If $\left(x^4+\frac{1}{x^4}\right)=2$, find the value of $\left(x+\frac{1}{x}\right)$

(i) 0 (ii) 4 (iii) 3 (iv) 2 (v) 1

7. If $\left(x^2+\frac{1}{x^2}\right)=38$, find the value of $\left(x-\frac{1}{x}\right)$

(i) 7 (ii) 9 (iii) 5 (iv) 3 (v) 6

8. If $\left(x^4+\frac{1}{x^4}\right)=322$, find the value of $\left(x-\frac{1}{x}\right)$

(i) 5 (ii) 3 (iii) 6 (iv) 2 (v) 4

9. If $\left(x-\frac{1}{x}\right)=4$, find the value of $\left(x^3-\frac{1}{x^3}\right)$

(i) 79 (ii) 74 (iii) 75 (iv) 76 (v) 77

10. If $\left(x+\frac{1}{x}\right)=8$, find the value of $\left(x^3+\frac{1}{x^3}\right)$

(i) 489 (ii) 488 (iii) 485 (iv) 487 (v) 491

11. If $\left(6x+\frac{1}{2x}\right)=6$, find the value of $\left(36x^2+\frac{1}{4x^2}\right)$

(i) 32 (ii) 29 (iii) 30 (iv) 31 (v) 27

12. If $\left(4x-\frac{1}{3x}\right)=7$, find the value of $\left(16x^2+\frac{1}{9x^2}\right)$

(i) $\frac{257}{5}$ (ii) $\frac{155}{3}$ (iii) $\frac{157}{3}$ (iv) 53 (v) 51

13. If $\left(3x-\frac{1}{3x}\right)=8$, find the value of $\left(27x^3-\frac{1}{27x^3}\right)$

(i) 533 (ii) 535 (iii) 536 (iv) 539 (v) 537

14. If $(a+b)=10$, $ab=24$, find $(a^2+b^2)$

(i) 54 (ii) 52 (iii) 51 (iv) 53 (v) 50

15. If $(a^2+b^2)=20$, $ab=8$, find $(a+b)$

(i) 8 (ii) 3 (iii) 5 (iv) 6 (v) 7

16. If $(a-b)=1$, $ab=20$, find $(a^2-b^2)$

(i) 10 (ii) 11 (iii) 6 (iv) 8 (v) 9

17. If $(a^2-b^2)=11$, $ab=30$, find $(a-b)$

(i) 2 (ii) -1 (iii) 0 (iv) 1 (v) 3

18. If $(2a+8b)=34$ , $ab=15$ , find $(4a^2+64b^2)$

(i) 677 (ii) 675 (iii) 674 (iv) 679 (v) 676

19. If $(25a^2+16b^2)=289$ , $ab=6$ , find $(5a+4b)$

(i) 26 (ii) 24 (iii) 21 (iv) 23 (v) 22

20. If $(a+b)=9$ , $ab=18$ , find $(a^3+b^3)$

(i) 243 (ii) 244 (iii) 242 (iv) 245 (v) 240

21. If $(a-b)=6$ , $ab=16$ , find $(a^3-b^3)$

(i) 505 (ii) 506 (iii) 503 (iv) 501 (v) 504

22. If $(6a+2b)=36$ , $ab=15$ , find $(216a^3+8b^3)$

(i) 27215 (ii) 27214 (iii) 27219 (iv) 27217 (v) 27216

23. If $(a+b)=8$ , $ab=15$ , find $(a^4+b^4)$

(i) 707 (ii) 706 (iii) 705 (iv) 703 (v) 709

24. If $(a^4+b^4)=1377$ , $ab=18$ , find $(a+b)$

(i) 12 (ii) 6 (iii) 8 (iv) 10 (v) 9

25. If $(a-b)=1$ , $ab=12$ , find $(a^4-b^4)$

(i) 174 (ii) 175 (iii) 176 (iv) 173 (v) 178

26. If $(2a+3b)=21$ , $ab=18$ , find $(16a^4+81b^4)$

(i) 27294 (ii) 27300 (iii) 27298 (iv) 27296 (v) 27297

27. If $(256a^4+16b^4)=341776$ , $ab=30$ , find $(4a+2b)$

(i) 35 (ii) 31 (iii) 34 (iv) 33 (v) 37

28. If $(a+b+c)=13$ , $(a^2+b^2+c^2)=75$ , find $(ab+ac+bc)$

(i) 46 (ii) 47 (iii) 44 (iv) 48 (v) 50

29. If $(a+b+c)=14$ , $(ab+ac+bc)=65$ , find $(a^2+b^2+c^2)$

(i) 64 (ii) 68 (iii) 66 (iv) 67 (v) 65

## Assignment Key

| | | | | | |
|---|---|---|---|---|---|
| 1) (i) | 2) (ii) | 3) (i) | 4) (v) | 5) (i) | 6) (iv) |
| 7) (v) | 8) (v) | 9) (iv) | 10) (ii) | 11) (iii) | 12) (ii) |
| 13) (iii) | 14) (ii) | 15) (iv) | 16) (v) | 17) (iv) | 18) (v) |
| 19) (iv) | 20) (i) | 21) (v) | 22) (v) | 23) (ii) | 24) (v) |
| 25) (ii) | 26) (v) | 27) (iii) | 28) (ii) | 29) (iii) | |