Using the formula $a^3 + 3a^2b + 3ab^2 + b^3$:

36	36	64	64
× 6	× 24	× 18	×8
216	864	1152	512
+ 98	+ 120	+ 51	
314	98**4**	12**03**	

$$\therefore (68)^3 = 314432$$

Q4

Answer :

$(84)^3$

Here, $a = 8$ and $b = 4$

Using the formula $a^3 + 3a^2b + 3ab^2 + b^3$:

64	64	16	16
× 8	× 12	× 24	× 4
512	768	384	64
+ 80	+ 39	+ 6	
592	807	390	

∴ $(84)^3$ = 592704

Q1

Answer:

$\sqrt[3]{64}$

By prime factorisation:

$64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$
$= (2 \times 2 \times 2) \times (2 \times 2 \times 2)$

∴ $\sqrt[3]{64} = \sqrt[3]{(2)^3 \times (2)^3} = (2 \times 2) = 4$

Q2

Answer:

$\sqrt[3]{343}$

By prime factorisation:

$343 = 7 \times 7 \times 7$
$= (7 \times 7 \times 7)$

∴ $\sqrt[3]{343} = \sqrt[3]{7^3} = 7$

Q3

Answer:

$\sqrt[3]{729}$

By prime factorisation:

By prime factorisation:

```
3 | 729
3 | 243
3 | 81
3 | 27
3 | 9
3 | 3
  | 1
```

$729 = 3 \times 3 \times 3 \times 3 \times 3 \times 3$

$\quad = (3 \times 3 \times 3) \times (3 \times 3 \times 3)$

$\therefore \sqrt[3]{729} = (3 \times 3) = 9$

Q4

Answer :

$\sqrt[3]{1728}$

By prime factorisation:

```
2 | 1728
2 | 864
2 | 432
2 | 216
2 | 108
2 | 54
3 | 27
3 | 9
3 | 3
  | 1
```

*********** END **********

*********** END **********