Cubes and Cubes Roots Ex 4.1 Q17

Answer :

(i)

To evaluate the value of the given expression, we can proceed as follows:

$$\left\{\left(5^2+12^2\right)^{1/2}\right\}^3$$
$$=\left\{(25+144)^{1/2}\right\}^3$$
$$=\left\{(169)^{1/2}\right\}^3$$
$$=\left\{\sqrt{(169)}\right\}^3$$
$$=\left\{\sqrt{13\times 13}\right\}^3$$
$$=\{13\}^3$$
$$=13\times 13\times 13=2197$$

(ii)

To evaluate the value of the given expression, we can proceed as follows:

$$\left\{\left(6^2+8^2\right)^{1/2}\right\}^3$$
$$=\left\{(36+64)^{1/2}\right\}^3$$
$$=\left\{(100)^{1/2}\right\}^3$$
$$=\left\{\sqrt{(100)}\right\}^3$$
$$=\left\{\sqrt{10\times 10}\right\}^3$$
$$=\{10\}^3=10\times 10\times 10=1000$$

Cubes and Cubes Roots Ex 4.1 Q18

Answer :

Properties:

If a numbers ends with digits 1, 4, 5, 6 or 9, its cube will have the same ending digit.
If a number ends with 2, its cube will end with 8.
If a number ends with 8, its cube will end with 2.
If a number ends with 3, its cube will end with 7.
If a number ends with 7, its cube will end with 3.

From the above properties, we get:
Cube of the number 31 will end with 1.
Cube of the number 109 will end with 9.
Cube of the number 388 will end with 2.
Cube of the number 833 will end with 7.
Cube of the number 4276 will end with 6.
Cube of the number 5922 will end with 8.
Cube of the number 77774 will end with 4.
Cube of the number 44447 will end with 3.
Cube of the number 125125125 will end with 5.

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