## Squares and Square Roots Ex 3.4 Q3

**Answer :**

The prime factorisation of 180:
180 = 2 x 2 x 3 x 3 x 5
Grouping the factors into pairs of equal factors, we get:
180 = (2 x 2) x (3 x 3) x 5
The factor, 5 does not have a pair. Therefore, we must multiply 180 by 5 to make a perfect square. The new number is:
(2 x 2) x (3 x 3) x (5 x 5) = 900
Taking one factor from each pair on the LHS, the square root of the new number is 2 x 3 x 5, which is equal to 30.

## Squares and Square Roots Ex 3.4 Q4

**Answer :**

The prime factorisation of 147:
147 = 3 x 7 x 7
Grouping the factors into pairs of equal factors, we get:
147 = 3 x (7 x 7)
The factor, 3 does not have a pair. Therefore, we must multiply 147 by 3 to make a perfect square. The new number is:
(3 x 3) x (7 x 7) = 441
Taking one factor from each pair on the LHS, the square root of the new number is 3 x 7, which is equal to 21.

## Squares and Square Roots Ex 3.4 Q5

**Answer :**

The prime factorisation of 3645:
3645 = 3 x 3 x 3 x 3 x 3 x 3 x 5
Grouping the factors into pairs of equal factors, we get:
3645 = (3 x 3) x (3 x 3) x (3 x 3) x 5
The factor, 5 does not have a pair. Therefore, we must divide 3645 by 5 to make a perfect square. The new number is:
(3 x 3) x (3 x 3) x (3 x 3) = 729
Taking one factor from each pair on the LHS, the square root of the new number is 3 x 3 x 3, which is equal to 27.

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