Squares and Square Roots Ex 3.5 Q8

Answer :

60 soldiers are left out.

∴Remainaing soldiers = 8160 − 60 = 8100

The number of soldiers in each row to form a perfect square would be the square root of 8100. We have to find the square root of 8100 by the long division method as shown below:

```
   90
 9 | 8100
 9 | 81
   | 000
```

Hence, the number of soldiers in each row to form a perfect square is 90.

Squares and Square Roots Ex 3.5 Q9

Answer :

Area of the square field = 60025 m^2

The length of the square field would be the square root of 60025.

Using the long division method:

```
   245
 2 | 60025
 2 | 4
---|------
44 | 200
 4 | 176
---|------
485| 2425
 5 | 2425
---|------
   | 0
```

Hence, the length of the square field is 245 m.

The square has four sides, so the number of boundaries of the field is 4.

The distance *s* covered by the man = 245 m × 4 = 980 m = 0.98 km

If the velocity *v* is 18 km/hr, the required time *t* can be calculated using the following formula:

$t = \frac{s}{v}$

$t = \frac{0.98}{18} = 0.054hr = 3minutes, 16seconds$

So, the man will return to the starting point after 3 minutes and 16 seconds.

Squares and Square Roots Ex 3.5 Q10

Answer :

First, we have to find the area of the square lawn, which the total cost divided by the cost of levelling and turfing per square metre:

$\text{Area of a square} = \frac{13322.5}{2.5} = 5329 \text{ m}^2$

The length of one side of the square is equal to the square root of the area. We will use the long division method to find it as shown below:

```
   73
 7 | 5329
 7 | 49
---|------
143| 429
 3 | 429
---|------
   | 0
```

∴ Length of one side of the square = 73 m

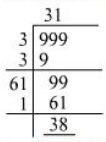
The circumference of the square is 73 × 4 = 292 m

∴ Total cost of fencing the lawn at Rs. 5 per metre = 292 × 5 = Rs. 1460

Squares and Square Roots Ex 3.5 Q11

Answer :

The greatest number with three digits is 999. To find the greatest perfect square with three digits, we must find the smallest number that must be subtracted from 999 in order to get a perfect square. For that, we have to find the square root by the long division method as shown below:



So, 38 must be subtracted from 999 to get a perfect square.

$999 - 38 = 961$

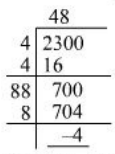
$961 = 31^2$

Hence, the greatest perfect square with three digits is 961.

Squares and Square Roots Ex 3.5 Q12

Answer :

To find the square root of 2300, we use the long division method:



23000 is 4 (704 – 700) less than 48^2. Hence, 4 must be added to 2300 to get a perfect square.

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