



Q2

Answer :

A perfect square is a product of two perfectly equal numbers.

(i)

Resolving into prime factors:

$$1225 = 25 \times 49 = 5 \times 5 \times 7 \times 7 = 5 \times 7 \times 5 \times 7 = 35 \times 35 = (35)^2$$

Thus, 1225 is the perfect square of 35.

(ii)

Resolving into prime factors:

$$2601 = 9 \times 289 = 3 \times 3 \times 17 \times 17 = 3 \times 17 \times 3 \times 17 = 51 \times 51 = (51)^2$$

Thus, 2601 is the perfect square of 51.

(iii)

Resolving into prime factors:

$$5929 = 11 \times 539 = 11 \times 7 \times 77 = 11 \times 7 \times 11 \times 7 = 77 \times 77 = (77)^2$$

Thus, 5929 is the perfect square of 77.

(iv)

Resolving into prime factors:

$$7056 = 12 \times 588 = 12 \times 7 \times 84 = 12 \times 7 \times 12 \times 7 = (12 \times 7)^2 = (84)^2$$

Thus, 7056 is the perfect square of 84.

(v)

Resolving into prime factors:

$$8281 = 49 \times 169 = 7 \times 7 \times 13 \times 13 = 7 \times 13 \times 7 \times 13 = (7 \times 13)^2 = (91)^2$$

Thus, 8281 is the perfect square of 91.

Q3

Answer :

1. Resolving 3675 into prime factors:

$$3675 = 3 \times 5 \times 5 \times 7 \times 7$$

Thus, to get a perfect square, the given number should be multiplied by 3.

$$\text{New number} = (3^2 \times 5^2 \times 7^2) = (3 \times 5 \times 7)^2 = (105)^2$$

Hence, the new number is the square of 105.

2. Resolving 2156 into prime factors:

$$2156 = 2 \times 2 \times 7 \times 7 \times 11 = (2^2 \times 7^2 \times 11)$$

Thus to get a perfect square, the given number should be multiplied by 11.

$$\text{New number} = (2^2 \times 7^2 \times 11^2) = (2 \times 7 \times 11)^2 = (154)^2$$

Hence, the new number is the square of 154.

3. Resolving 3332 into prime factors:

$$3332 = 2 \times 2 \times 7 \times 7 \times 17 = 2^2 \times 7^2 \times 17$$

Thus, to get a perfect square, the given number should be multiplied by 17.

$$\text{New number} = (2^2 \times 7^2 \times 17^2) = (2 \times 7 \times 17)^2 = (238)^2$$

Hence, the new number is the square of 238.

4. Resolving 2925 into prime factors:

$$2925 = 3 \times 3 \times 5 \times 5 \times 13 = 3^2 \times 5^2 \times 13$$

Thus, to get a perfect square, the given number should be multiplied by 13.

$$\text{New number} = (3^2 \times 5^2 \times 13^2) = (3 \times 5 \times 13)^2 = (195)^2$$

Hence, the number whose square is the new number is 195.

5. Resolving 9075 into prime factors:

$$9075 = 3 \times 5 \times 5 \times 11 \times 11 = 3 \times 5^2 \times 11^2$$

Thus, to get a perfect square, the given number should be multiplied by 3.

$$\text{New number} = (3^2 \times 5^2 \times 11^2) = (3 \times 5 \times 11)^2 = (165)^2$$

Hence, the new number is the square of 165.

6. Resolving 7623 into prime factors:

$$7623 = 3 \times 3 \times 7 \times 11 \times 11 = 3^2 \times 7 \times 11^2$$

Thus, to get a perfect square, the given number should be multiplied by 7.

$$\text{New number} = (3^2 \times 7^2 \times 11^2) = (3 \times 7 \times 11)^2 = (231)^2$$

Hence, the number whose square is the new number is 231.

7. Resolving 3380 into prime factors:

$$3380 = 2 \times 2 \times 5 \times 13 \times 13 = 2^2 \times 5 \times 13^2$$

Thus, to get a perfect square, the given number should be multiplied by 5.

$$\text{New number} = (2^2 \times 5^2 \times 13^2) = (2 \times 5 \times 13)^2 = (130)^2$$

8. Resolving 2475 into prime factors:

$$2475 = 3 \times 3 \times 5 \times 5 \times 11 = 3^2 \times 5^2 \times 11$$

Thus, to get a perfect square, the given number should be multiplied by 11.

$$\text{New number} = (3^2 \times 5^2 \times 11^2) = (3 \times 5 \times 11)^2 = (165)^2$$

Hence, the new number is the square of 165.

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