Exercise 3D

## Q1

**Answer :**

By prime factorisation method:

$$225 = 3 \times 3 \times 5 \times 5$$
$$\sqrt{225} = 3 \times 5 = 15$$

## Q2

**Answer :**

By prime factorisation:

$$441 = 3 \times 3 \times 7 \times 7$$
$$\therefore \sqrt{441} = 3 \times 7 = 21$$

## Q3

**Answer :**

Resolving into prime factors:

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

$$\therefore \sqrt{729} = 3 \times 3 \times 3 = 27$$

## Q4

**Answer :**

Resolving into prime factors:

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$$1296 = 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 3$$

$$\therefore \sqrt{1296} = 2 \times 2 \times 3 \times 3 = 36$$

Q5

**Answer :**

Resolving into prime factors:

$$2025 = 3 \times 3 \times 3 \times 3 \times 5 \times 5$$

$$\therefore \sqrt{2025} = 3 \times 3 \times 5 = 45$$

Q6

**Answer :**

Resolving into prime factors:

$$4096 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$$

$$\therefore \sqrt{4096} = 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 64$$

Q7

**Answer :**

Resolving into prime factors:

$$7056 = 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 7 \times 7$$

$$\therefore \sqrt{7056} = 2 \times 2 \times 3 \times 7 = 84$$

Q8

**Answer :**

Resolving into prime factors:

$$8100 = 2 \times 2 \times 3 \times 3 \times 3 \times 3 \times 5 \times 5$$

$$\therefore \sqrt{8100} = 2 \times 3 \times 3 \times 5 = 90$$

Q9

**Answer :**

Resolving into prime factors:

$$9216 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3$$

$$\therefore \sqrt{9216} = 2 \times 2 \times 2 \times 2 \times 2 \times 3 = 96$$

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