ANSWERS

1. Find the value each square root.

   a) $\sqrt{121}$ = __11__   b) $\sqrt{225}$ = __15__   c) $\sqrt{144}$ = __12__

   d) $\sqrt{289}$ = __17__   e) $\sqrt{361}$ = __19__   f) $\sqrt{169}$ = __13__

2. Evaluate.

   a) $\sqrt{9} \times \sqrt{4}$ = __6__

   b) $\sqrt{25} \times \sqrt{81}$ = __45__

   c) $\sqrt{2} \times \sqrt{8}$ = __4__

   d) $\sqrt{7} \times \sqrt{7}$ = __7__

   e) $\sqrt{5} \times \sqrt{5}$ = __5__

   f) $\sqrt{9} \times \sqrt{9}$ = __9__

   g) $\sqrt{2} + \sqrt{2}$ = __2__

   h) $\sqrt{8} + \sqrt{8}$ = __8__

   i) $4\sqrt{5} - 2\sqrt{5}$ = __$2\sqrt{5}$__

   j) $3\sqrt{3} \times 2\sqrt{3}$ = __18__

   k) $8\sqrt{2} \times 2\sqrt{2}$ = __32__

   l) $6\sqrt{3} \cdot \sqrt{12}$ = __18__

3. Evaluate the expression when a =11 and b = 6.

   a. $\sqrt{4a-8}$ = __6__

   b. $\sqrt{24b}$ = __12__

   c. $\sqrt{a^2}$ = __11__

   d. $\sqrt{4b+12}$ = __6__

   e. $\sqrt{b^2}$ = __6__

   f. $\sqrt{5a+9}$ = __8__

4. Solve. Round the answers to 2 decimals

   a) $\sqrt{163}$ = __12.76__   b) $\sqrt{274}$ = __16.55__   c) $\sqrt{111}$ = __10.53__

   d) $\sqrt{102}$ = __10.1__   e) $\sqrt{146}$ = __12.08__   f) $\sqrt{84}$ = __9.16__

   g) $\sqrt{130}$ = __11.40__   h) $\sqrt{91}$ = __9.53__   i) $\sqrt{176}$ = __13.26__

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Find the square root.

(1) Square root of $\dfrac{400}{49} = \sqrt{\dfrac{2\times2\times2\times2\times5\times5}{\sqrt{7\times7}}} = \dfrac{2\times2\times5}{7} = \dfrac{20}{7}$

(2) $\dfrac{10}{11}$ (3) $\dfrac{15}{8}$ 4) $\dfrac{25}{9} = \dfrac{5}{3}$

2   Using the division method we may find the square root of the given number;

i) 2209

```
           47
    4  | 22 09
   +4  | -16
   ____|_____
   87  | 6 09
   +7  | -6 09
       |_____
       |   0
```

Therefore, $\sqrt{2209} = 47$

ii) 3969

Therefore, $\sqrt{3969} = 63$

iii) 5041

Therefore, $\sqrt{5041} = 71$

3. $\sqrt{676} = 26$

4. $\sqrt{64} = 8$

5. $\sqrt{225} = 15$

6.   Find the number, when multiplied by itself gives 289

i) 35   (ii) 17   iii) 25   iv) 15

7.   Find the number, when multiplied by itself gives 121.

i) 6   (ii) 11   iii) 8   iv) 16

8.   Which of the following is the square root of 1600?

i) 50   ii) 400   (iii) 40   iv) 80

9.   Evaluate on square root of numbers in decimal form:

i) $\sqrt{42.25}$ Using the division method we may find the square root of the given number;

```
           6.5
     6  | 42.25
        | 36
   _____|_____
   125  | 625
        | 625
        |_____
        |   0
```

Therefore, $\sqrt{42.25} = 6.5$

ii) $\sqrt{52.5625}$

Therefore, $\sqrt{52.5625} = 7.25$

Solve:

i) 10   ii) 0   iii) 12

iv) 4   v) 15   vi) 13