Squares and Square Roots Ex 3.9 Q9

Answer :

Using the table to find $\sqrt{41}$

$$\sqrt{6929} = \sqrt{169} \times \sqrt{41}$$
$$= 13 \times 6.4031$$
$$= 83.239$$

Squares and Square Roots Ex 3.9 Q10

Answer :

Using the table to find $\sqrt{3}$ and $\sqrt{7}$

$$\sqrt{25725} = \sqrt{3 \times 5 \times 5 \times 7 \times 7 \times 7}$$
$$= \sqrt{3} \times 5 \times 7 \times \sqrt{7}$$
$$= 1.732 \times 5 \times 7 \times 2.646$$
$$= 160.41$$

Squares and Square Roots Ex 3.9 Q11

Answer :

Using the table to find $\sqrt{2}$ and $\sqrt{41}$

$$\sqrt{1312} = \sqrt{2 \times 2 \times 2 \times 2 \times 2 \times 41}$$
$$= 2 \times 2\sqrt{2} \times \sqrt{41}$$
$$= 2 \times 2 \times 1.414 \times 6.4031$$
$$= 36.222$$

Squares and Square Roots Ex 3.9 Q12

Answer :

$$\sqrt{4192} = \sqrt{2 \times 2 \times 2 \times 2 \times 2 \times 131}$$
$$= 2 \times 2\sqrt{2} \times \sqrt{131}$$

The square root of 131 is not listed in the table. Hence, we have to apply long division to find it.

```
            11.4455
      1 | 131
      1 | 1
     21 | 31
      1 | 21
    224 | 1000
      4 | 896
   2284 | 10400
      4 | 9136
  22885 | 126400
      5 | 114425
        | 52975
```

Substituting the values:
$$= 2 \times 2 \times 11.4455 \qquad \text{(using the table to find } \sqrt{2}\text{)}$$
$$= 64.75$$

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