

Square Root Worksheet-1 — Factorization Method

Method: prime factorization — split into prime factors, pair them, take one factor from each pair (perfect squares).

Find each square root by prime factorization. Show your factor pairs, then write the answer.

Name: _____

Date: _____

Score: _____ / 20

1) $\sqrt{225} =$

Answer: _____

2) $\sqrt{8100} =$

Answer: _____

3) $\sqrt{8649} =$

Answer: _____

4) $\sqrt{3025} =$

Answer: _____

5) $\sqrt{6084} =$

Answer: _____

6) $\sqrt{6561} =$

Answer: _____

7) $\sqrt{5184} =$

Answer: _____

8) $\sqrt{9409} =$

Answer: _____

9) $\sqrt{169} =$

Answer: _____

10) $\sqrt{5929} =$

Answer: _____

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Name: _____

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11) $\sqrt{15876} =$

Answer: _____

12) $\sqrt{16900} =$

Answer: _____

13) $\sqrt{6400} =$

Answer: _____

14) $\sqrt{7056} =$

Answer: _____

15) $\sqrt{14400} =$

Answer: _____

16) $\sqrt{2704} =$

Answer: _____

17) $\sqrt{729} =$

Answer: _____

18) $\sqrt{5625} =$

Answer: _____

19) $\sqrt{324} =$

Answer: _____

20) $\sqrt{8836} =$

Answer: _____

Square Root Worksheet-2 — Pairing of Digits & Dwandwa Yoga Sutra

Sutra: Dwandwa Yoga (duplex) · pair the digits from the right, then use the duplex / long-division method (perfect squares).

Find each square root using the pairing-of-digits or Dwandwa Yoga (duplex) method. Show your working, then write the answer.

Name: _____

Date: _____

Score: _____ / 20

1) $\sqrt{148225} =$

Answer: _____

2) $\sqrt{1562500} =$

Answer: _____

3) $\sqrt{3493161} =$

Answer: _____

4) $\sqrt{251001} =$

Answer: _____

5) $\sqrt{1517824} =$

Answer: _____

6) $\sqrt{3613801} =$

Answer: _____

7) $\sqrt{1505529} =$

Answer: _____

8) $\sqrt{3928324} =$

Answer: _____

9) $\sqrt{3701776} =$

Answer: _____

10) $\sqrt{1196836} =$

Answer: _____

Square Root Worksheet-2 — Pairing of Digits & Dwandwa Yoga Sutra

Sutra: Dwandwa Yoga (duplex) · pair the digits from the right, then use the duplex / long-division method (perfect squares).

Find each square root using the pairing-of-digits or Dwandwa Yoga (duplex) method. Show your working, then write the answer.

Name: _____

Date: _____

Score: _____ / 20

11) $\sqrt{5612161} =$

Answer: _____

12) $\sqrt{3041536} =$

Answer: _____

13) $\sqrt{2608225} =$

Answer: _____

14) $\sqrt{4541161} =$

Answer: _____

15) $\sqrt{265225} =$

Answer: _____

16) $\sqrt{3222025} =$

Answer: _____

17) $\sqrt{3865156} =$

Answer: _____

18) $\sqrt{192721} =$

Answer: _____

19) $\sqrt{3984016} =$

Answer: _____

20) $\sqrt{4313929} =$

Answer: _____

Square Root Worksheet-3 — Non-Perfect Square Numbers (to 2 d.p.)

Method: pairing-of-digits long division, continued past the decimal point to two places (digits are truncated, not rounded).

These are not perfect squares. Find each square root correct to two decimal places using the pairing-of-digits method.

Name: _____

Date: _____

Score: _____ / 20

1) $\sqrt{883856} =$

Answer: _____ (to 2 d.p.)

2) $\sqrt{405612} =$

Answer: _____ (to 2 d.p.)

3) $\sqrt{642237} =$

Answer: _____ (to 2 d.p.)

4) $\sqrt{917630} =$

Answer: _____ (to 2 d.p.)

5) $\sqrt{525793} =$

Answer: _____ (to 2 d.p.)

6) $\sqrt{188981} =$

Answer: _____ (to 2 d.p.)

7) $\sqrt{10578} =$

Answer: _____ (to 2 d.p.)

8) $\sqrt{477035} =$

Answer: _____ (to 2 d.p.)

9) $\sqrt{660159} =$

Answer: _____ (to 2 d.p.)

10) $\sqrt{699780} =$

Answer: _____ (to 2 d.p.)

Square Root Worksheet-3 — Non-Perfect Square Numbers (to 2 d.p.)

Method: pairing-of-digits long division, continued past the decimal point to two places (digits are truncated, not rounded).

These are not perfect squares. Find each square root correct to two decimal places using the pairing-of-digits method.

Name: _____

Date: _____

Score: _____ / 20

11) $\sqrt{353603} =$

Answer: _____ (to 2 d.p.)

12) $\sqrt{319467} =$

Answer: _____ (to 2 d.p.)

13) $\sqrt{631724} =$

Answer: _____ (to 2 d.p.)

14) $\sqrt{305175} =$

Answer: _____ (to 2 d.p.)

15) $\sqrt{7317} =$

Answer: _____ (to 2 d.p.)

16) $\sqrt{365175} =$

Answer: _____ (to 2 d.p.)

17) $\sqrt{551103} =$

Answer: _____ (to 2 d.p.)

18) $\sqrt{300023} =$

Answer: _____ (to 2 d.p.)

19) $\sqrt{488304} =$

Answer: _____ (to 2 d.p.)

20) $\sqrt{850872} =$

Answer: _____ (to 2 d.p.)

Worksheet-3 answers are correct to two decimal places (truncated, as the long-division method produces them).

Square Root Worksheet-1 — Factorization Method

1) 15	2) 90	3) 93	4) 55
5) 78	6) 81	7) 72	8) 97
9) 13	10) 77	11) 126	12) 130
13) 80	14) 84	15) 120	16) 52
17) 27	18) 75	19) 18	20) 94

Square Root Worksheet-2 — Pairing of Digits & Dwandwa Yoga Sutra

1) 385	2) 1250	3) 1869	4) 501
5) 1232	6) 1901	7) 1227	8) 1982
9) 1924	10) 1094	11) 2369	12) 1744
13) 1615	14) 2131	15) 515	16) 1795
17) 1966	18) 439	19) 1996	20) 2077

Square Root Worksheet-3 — Non-Perfect Squares (2 d.p.)

1) 940.13	2) 636.87	3) 801.39	4) 957.93
5) 725.11	6) 434.71	7) 102.84	8) 690.67
9) 812.50	10) 836.52	11) 594.64	12) 565.21
13) 794.81	14) 552.42	15) 85.53	16) 604.29
17) 742.36	18) 547.74	19) 698.78	20) 922.42