

1 ✓

3 ✓

6 ✓

9 ✓

5 ✓

(10-99)²

Base → 200

Base → 100

① $\frac{(208)^2}{+8} \rightarrow 43264$
 216×2

② $\frac{(209)^2}{+9} \rightarrow 43681$
 218×2

① $\frac{(98)^2}{-2} \rightarrow 9604$

② $93^2 \rightarrow 8649$

③ $94^2 \rightarrow 8836$

$\frac{200}{100} = 2$

Base \rightarrow 200

$$\begin{array}{r} (199)^2 \\ -1 \end{array} = 39601$$

$$198 \times 2$$

Base \rightarrow 300

$$\begin{array}{r} (308)^2 \\ +8 \end{array} \rightarrow 94864$$

$$316 \times 3$$

Base \rightarrow 600

①

$$\# \begin{array}{r} (612)^2 \\ +12 \end{array} \rightarrow 374544$$

$$624 \times 6$$

$$\begin{array}{r} (194)^2 \\ -6 \end{array} \rightarrow 37636$$

$$188 \times 2$$

$$\frac{300}{100} = 3$$

100

150

200

250

300

350

$$\begin{array}{r} (293)^2 \\ -7 \end{array} \rightarrow 85849$$

$$286 \times 3$$

Base \rightarrow 150

$$\begin{array}{r} (153)^2 \\ +3 \end{array} \rightarrow 23409$$

$$\frac{786 \times 3}{2}$$

$$(124)^2$$

MIXTURE (CP)

+10%

+10% $\rightarrow \frac{1}{10} \rightarrow w$
 $\rightarrow m$

m : w
~~100 : 10~~
10 : 1

20% $\rightarrow \frac{1}{5} \rightarrow w$
 $\rightarrow m$

$16\frac{2}{3}\%$ $\rightarrow \frac{1}{6} \rightarrow w$
 $\rightarrow m$

MIXTURE : m
7 : 6

7 7	$\overline{6084}$ $\underline{49}$	(78)
148 8	1184 1184	
156 ↖	xxxxx	

$$78^2 = 6084$$

$$\sqrt{6084} = 78$$

$$\sqrt{6084}$$

$8 \times 7 = 56$

$$7 \overline{) 2}$$

$$7 \overline{) 8}$$

(a) 87

(b) 68

~~(c) 78~~

(c) 88

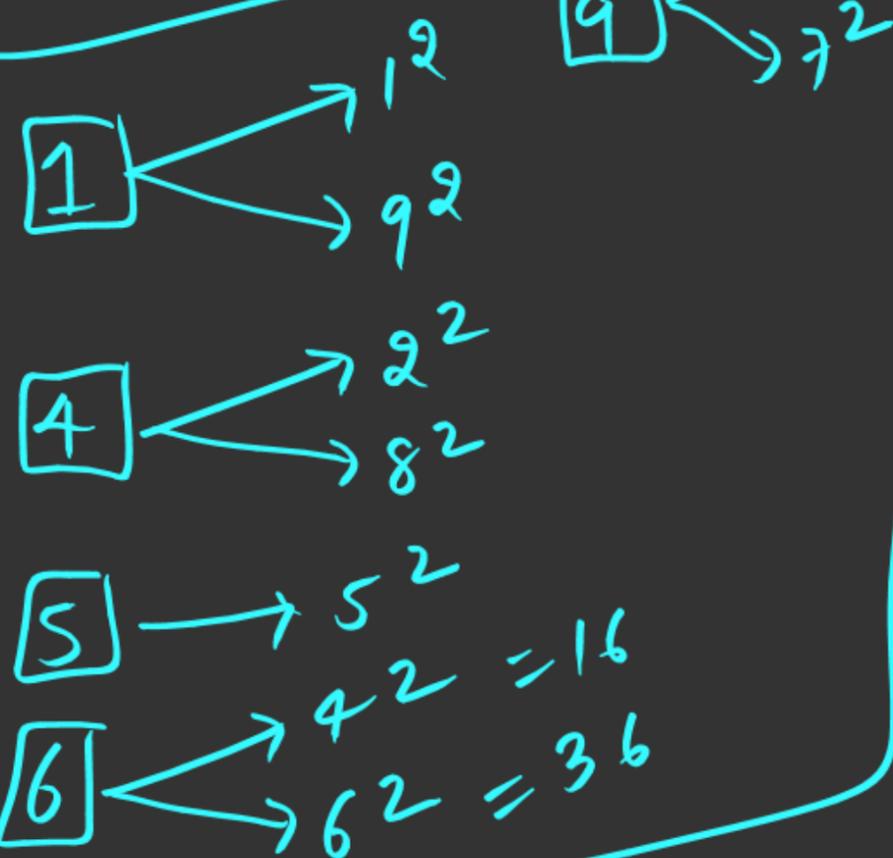
$$\sqrt{4096}$$

$6 \times 7 = 42$

$$6 \mid 4$$

$$66$$

$$\sqrt{12544}$$



$$\sqrt{12544}$$

$11 \times 12 = 132$

112 ✓

$$11 \overline{) 8}$$

$$\boxed{4} \begin{cases} \rightarrow 2^2 = 4 \\ \rightarrow 8^2 = 64 \end{cases}$$

~~$$12544$$~~

$\sqrt{41616}$

$20 \times 21 = 420$

20 | 4 ✓

206

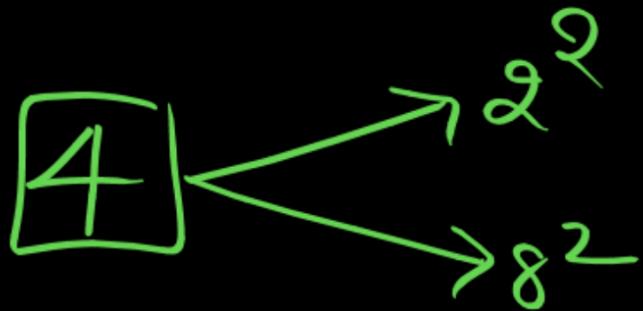
7. $\sqrt{6084} = ?$

~~(A) 87~~

(B) 68

(C) 78

(D) 88



8. $\sqrt{2025} = ?$

45

(A) 55

(B) 46 ~~X~~

(C) 45

(D) 65

9. What is the square root of 7.29 ?

7.29 का वर्गमूल कितना है?

(A) 2.7

(C) 3.7

$$\sqrt{0.9} = 0.3$$

$$\sqrt{0.09}$$

(B) 2.3

(D) 3.3

$$\sqrt{72.9} \times$$

अपरिचित

$$\sqrt{729} = 27$$

$$\sqrt{0.00000729}$$

0.0027

10. $\sqrt{1 + \frac{x}{144}} = \frac{13}{12}$, then find the value of x -

$\sqrt{1 + \frac{x}{144}} = \frac{13}{12}$ हो तो x का मान ज्ञात करें-

(A)

1

$$\sqrt{\frac{144+x}{144}} = \frac{13}{12}$$

(B)

12

(C)

13

$$\frac{144+x}{144} = \frac{169}{144}$$

~~(D)~~

25

$$144+x=169$$

$$x=169-144=25$$

11. $\sqrt{1 + \frac{x}{169}} = \frac{14}{13}$, then find the value of x -

$\sqrt{1 + \frac{x}{169}} = \frac{14}{13}$ हो तो x का मान ज्ञात करें-

(A) 1

1

$$\frac{169+x}{169} = \frac{196}{169}$$

(B) 13

13

(C) 25

25

$$x = 27$$

~~(D) 27~~

27

12. $\sqrt{1296} = 36$, then find the value of $\sqrt{12.96} + \sqrt{0.1296}$
 $+ \sqrt{0.001296} + \sqrt{0.00001296}$ -

$\sqrt{1296} = 36$ हो तो $\sqrt{12.96} + \sqrt{0.1296} + \sqrt{0.001296} + \sqrt{0.00001296}$
 का मान ज्ञात करें-

~~(A) 3.9996~~

(C) 39.996

16^x

(B) 0.39996

(D) 3.6996

3.6

0.36

0.036

0.0036

3.9996

$\sqrt{1296}$
 $3 \times 4 = 12$
 $3/6$
 34
 35^2
 1225

13. With which small number should 294 be multiplied that product is a whole square?

294 को किस छोटी संख्या से गुणा किया जाय कि गुणनफल एक पूर्ण वर्ग हो?

~~(A) 2~~

~~(B) 3~~

(C) 6

(D) 24

$$\begin{array}{r|l} 2 & 294 \\ \hline & 147 \\ 3 & \\ \hline & 49 \\ 7 & \\ \hline & 7 \end{array}$$

$$294 \rightarrow 2 \times 3 \times 7 \times 7$$

$$= 6$$

$$2 \times 3 \times 7 \times 8$$

14. With what smallest number should 675 be multiplied so that the product may become a full cube?

675 को किस छोटी-से-छोटी संख्या से गुणा किया जाये कि गुणनफल एक पूर्ण घन हो जाए?

(A) 5

(C) 7

(B) 6

(D) 8

$$\begin{array}{r}
 5 \overline{) 675} \\
 \underline{135} \\
 27 \\
 \underline{27} \\
 0 \\
 3 \overline{) 9} \\
 \underline{9} \\
 0
 \end{array}$$

$$5^2 \times 3^3$$

(5)

15. What is the greatest number of 5 digits which is a whole square ?

पाँच अंकों की बड़ी से बड़ी संख्या कौन है, जो एक पूर्ण वर्ग है?

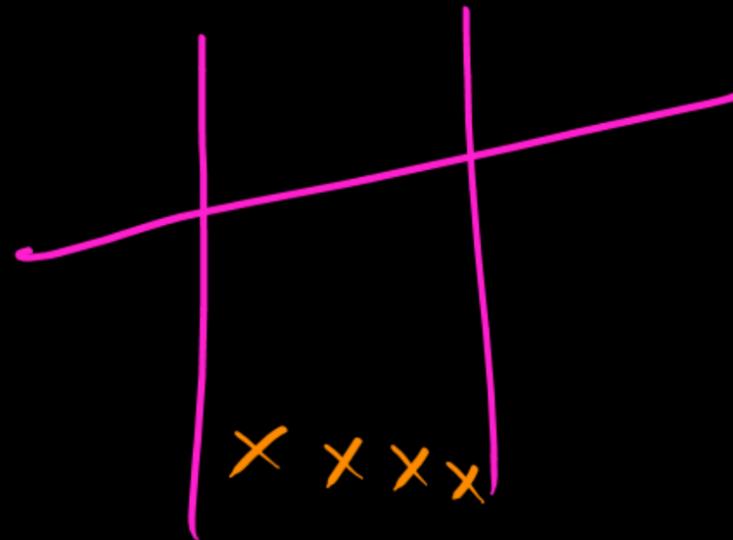
(A) 99999

(B) ~~99764~~ $\rightarrow 8 \times$

~~(C) ~~99976~~ = 4~~

(D) ~~99856~~ $\rightarrow 1$

2/3/7/8



$\frac{N^2}{9}$ $R \rightarrow 1, 0, 4, 1, 7$

16. The smallest number containing 6 digits which is a whole square-

6 अंकों की छोटी से छोटी संख्या, जो एक पूर्ण वर्ग हो-

(A) ~~$100025 = 8 \times$~~

(B) ~~$100049 = 5 \times$~~

~~(C) 100179~~
even

~~(D) 100489~~

$$\frac{N^2}{9} \boxed{R \rightarrow 1, 0, 4, 7}$$

$$\textcircled{1} \quad 3 \times 4 = 12$$

$$\textcircled{i} \quad 12 - 3 = 9$$

$$\textcircled{ii} \quad 12 + 4 = 16$$

$$\textcircled{2} \quad 6 \times 7 = 42$$

$$\textcircled{i} \quad 42 - 6 = 36$$

$$\textcircled{ii} \quad 42 + 7 = 49$$

$$\textcircled{3} \quad 11 \times 12 = 132$$

$$\textcircled{i} \quad 132 - 11 = 121$$

$$\textcircled{ii} \quad 132 + 12 = 144$$

$1123 \times 1124 + K$ एक पूर्ण वर्ग है

K न्यूनतम मान निकालें

$$\textcircled{1124}$$

17. Which lowest positive integer should be reduced from 4031×4032 to make remainder a full square?

4031×4032 में से कौन-सा न्यूनतम धन पूर्णांक घटाया जाए की शेषफल पूर्ण वर्ग हो?

दहीटी नठ

~~(A)~~ 4031

(B) 4039

(C) 4032

(D) 3112