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★ Finding Squares.

→ No. closer to 100 ★ ~~Between 25 & 100 after 100~~

$(102)^2 = (100+2)^2$

+2 ←

104 04 ←

1st 2 digits.

$(2)^2 = 4$

$103 = (100+3)^2$

+3 ←

1609

$(3)^2$

↓

09

$(107)^2 = (100+7)^2$

+7

$(7)^2 = 49$

11449

$(98)^2 = (100-2)^2$

−2 ←

$(2)^2 = 04$

9604

$(91)^2 = (100-9)^2$

−9

$(9)^2 = 81$

8281

$(112)^2 = (100+12)^2$

+12

$(12)^2 = 144$

12544

+1

12

$(112)^2 = (100+12)^2$

+12 ←

$(12)^2 = 144$

+1 ←

12544

1 carry

44 (Because we need till only 2 digits)

$(113)^2 = (100+13)^2$

+13

+1

$(13)^2 = 169$

12769 → Ans

$(99)^2 = (100-1)^2 = (1)^2 = 1$

$99 - 1$

9801

★ Important No:- $(88)^2 = (100-12)$ carry

$88 + 12$

$100 \mid 44$

$\hookrightarrow (12)^2 = 144$

$(88)^2 = (100-12)$ carry

-12

$\hookrightarrow (12)^2 = 144$

$76 \mid 44$

$+1$ ← carry will always add up.

7744 Ans

{ 88 is the only number whose Square's 1st two digit is last two digits are Same. }

$(24)^2 = 576$

$(25)^2 = 625$

$(26)^2 = 676$

$(27)^2 = 729 = (9)^3$

→ Any No ending with 5 → Square.

$9 \mid 5 = 9025$ Always

$9 + 1$

10×9

90

$8 \mid 5 = 7225$ always

$8 + 1$

9

72

$2 \mid 5 = 625$

$2 + 1$

3×3

6

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$65 = 4225$

$6 \times (6+1) = 42$

$10|5 = 110\ 25$

$10 \times (10+1) = 110$

→ No. closer to 50 (Finding Squares)
(Between 30 to 75)

$(52)^2 = (50+2)^2$

$(2)^2 = 04$

25
+2
27

ans = 2704

$(53)^2 = (50+3)^2$

$(3)^2 = 09$

25
+3
28

ans
2809

$(58)^2 = (50+8)^2$

25
+8
33

$(8)^2$
64

ans = 3364

→ $(49)^2 = (50-1)^2$

$(1)^2 = 01$

25
−1
2401

Ans

$(41)^2 = (50-9)^2$

25
−9
1681

$(9)^2 = 81$

Ans

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$(48)^2 = (50-2)^2$

$(2)^2 = 04$

25
−2
2304 Ans.

$(62)^2 = (50+12)^2$

$(12)^2 =$ 144

25
+12
++
3844

carry 1

$(63)^2 = (50+13)^2$

$(13)^2 = 169$

carry = 1

25
+13
++
3969

$(24)^2 = 576$
$(25)^2 = 625$
$(26)^2$ 676
$(27)^2 = 729 = (9)3$

$(21)^2 = 441$
$(22)^2 = 484$
$(23)^2 = 529$

$(14)^2 = 196$
$(15)^2 = 225$
$(16)^2 = 256$
$(17)^2 = 289$
$(18)^2$ 324
$(19)^2 = 361$
$(20)^2 = 400$

$(21)^2 = 441$
$(22)^2 = 484$
$(23)^2 = 529$
$(24)^2 = 576$
$(25)^2 = 625$
$(26)^2 = 676$
$(27)^2 = 729 = (9)3$

$(28)^2 = 784$
$(29)^2 = 841$
$(30)^2 = 900.$