

is divisible  
1. ~~348 divides~~<sup>d</sup> by 2 because last  
is 8, which is divisible<sup>-</sup> by 2 <sup>digit</sup>

where are you

doing it with  
the divisibility rule?

$$\begin{array}{r} 174 \\ 2 \overline{)348} \\ 2 \\ \hline 14 \\ 14 \\ \hline 008 \\ 8 \\ \hline 000 \end{array}$$

Q. 729 is divisible by 3 because  $7+2+9 = 18$ , which is divisible by 3

$$\begin{array}{r} 6 \\ \hline 12 \\ \underline{-12} \\ 009 \\ \underline{-9} \\ 000 \end{array}$$

3. 1516 is divisible by 4 because the last 2 digits are divisible by 4, which is 16

$$4 \overline{)1516}$$

12

$$\overline{0\bar{3}1}$$

28

036

36

000

4. 985 is divisible by 5 because the last digit is 5

$$\begin{array}{r} 197 \\ 5 \overline{)985} \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \hline \end{array}$$

$$\begin{array}{r} 48 \\ \hline \end{array}$$

$$\begin{array}{r} 45 \\ \hline 035 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ \hline \end{array}$$

$$\begin{array}{r} 000 \\ \hline \end{array}$$

5. 234 is divisible by 6 because  
2+3+4=9 is divisible by 3  
, and the last digit  
is 4, which is  
divisible by 2

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6  $\overline{)234}$

18

054

54

000

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6. 1024 is divisible by 8 because,

$$\begin{array}{r} 128 \\ 8 \overline{)1024} \\ 8 \\ \hline 024 \\ 02 \\ \hline 16 \\ 16 \\ \hline 000 \end{array}$$

the last 3 digits <sup>(024)</sup> are divisible by 8

7. 891 is divisible by 9 because

$$8+9+1=18$$

which is

divisible by 9

$$\begin{array}{r} 99 \\ \hline 9 \sqrt{891} \\ \underline{-8} \quad | \\ \hline 081 \\ \underline{-81} \\ \hline 00 \end{array}$$

8.  $\overline{1780}$  divisible by 10, because  
the last digit is 0

$$10 \overline{)1780}$$

$$\begin{array}{r} 10 \\ \overline{078} \\ 70 \\ \hline 080 \\ 80 \\ \hline 00 \end{array}$$

9. 1232 is divisible by 11, because

$$\begin{array}{r} 112 \\ 11 \overline{)1232} \\ -11 \\ \hline 12 \\ -11 \\ \hline 12 \\ -11 \\ \hline 1 \end{array}$$

$$1-2+3-2=0,$$

which is divisible by 11

$$\begin{array}{r} 11 \\ \hline 022 \\ -22 \\ \hline 00 \end{array}$$

10. 432 divisible by 12, because  
 $4+3+2=9$  is  
divisible by 3

$$\begin{array}{r} 36 \\ \hline 12 \overline{)432} \\ 36 \\ \hline 072 \\ 72 \\ \hline 00 \end{array}$$

Last 2 digits, 32 is divisible by 4

II. 567 is divisible by 3, because

$$\begin{array}{r} 189 \\ \hline 3 \overline{)567} \\ 3 \end{array}$$

$$5+6+7 = 18$$

is divisible by  
3

$$\begin{array}{r} 26 \\ 24 \\ \hline 027 \\ 27 \\ \hline 000 \end{array}$$

12. 2048 divides by 4  
is divisible

$$\begin{array}{r} 512 \\ 4 \overline{)2048} \\ 20 \\ \hline 004 \\ 004 \\ \hline 0008 \\ 0008 \\ \hline 0000 \end{array}$$

because,  
48 is divisible  
by 4

13. 675 is divisible by 5, because  
the last digit is 5

$$\begin{array}{r} 135 \\ 5 \overline{)675} \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \hline 17 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ \hline 025 \\ \hline \end{array}$$

$$\begin{array}{r} 25 \\ \hline 000 \\ \hline \end{array}$$

14. 318 is divisible by 6, because

$$\begin{array}{r} 53 \\ \hline 6 \overline{)318} \\ 30 \\ \hline 018 \\ 18 \\ \hline 000 \end{array}$$

$$3+1+8=12 \quad \text{is divisible by 3}$$

<sup>is</sup>  
8 divisible by 2

15. If 1728 is divisible by 8, because  
1728 is divisible  
by 8

$$\begin{array}{r} 216 \\ 8 \overline{)1728} \\ 16 \\ \hline 012 \\ 8 \\ \hline 0048 \\ 48 \\ \hline 0000 \end{array}$$

16. 9 divides 999 because  $9+9+9=27$

and 27 is divisible  
by 9

$$\begin{array}{r} \overbrace{999}^{111} \\ 9 \end{array} \begin{array}{r} \\ \hline 099 \\ 9 \end{array} \begin{array}{r} \\ \hline 09 \\ 9 \end{array} \begin{array}{r} \\ \hline 00 \end{array}$$

(7. 2500 divides by 10 because

$$\begin{array}{r} 250 \\ \hline 10 \overline{)2500} \\ 20 \\ \hline 050 \\ 50 \\ \hline 000 \\ 0 \end{array}$$

18. 803 divides by 11 because

$8-0+3 = 11$ , and 11 is divisible by 11

$$\begin{array}{r} 73 \\ \hline 11 \overline{)803} \\ 77 \\ \hline 033 \\ 33 \\ \hline 00 \end{array}$$

19. 12 divides 1344 because  
1344 is divisible by both  
4, and 3

4 → 44 is divisible by 4

3 →  $1+3+4+4=12$  is divisible by 3

$$\begin{array}{r} \overline{112} \\ (2) \overline{1344} \\ \overline{12} \\ \overline{14} \\ \overline{12} \\ \overline{24} \\ \overline{24} \\ \overline{00} \end{array}$$

20. 1234567890 is divisible by 3, 3,  
5, 9, and 10

2 → the last digit is 0

3 →  $1+2+3+4+5+6+7+8+9+0=45$  is divisible  
by 3

5 → last digit is 0

9 →  $1+2+3+4+5+6+7+8+9+0=45$  is divisible by 9

10 → last digit is 0

$$\begin{array}{r} \overline{617283945} \\ 2 \overline{)1234567890} \end{array}$$

12

$$\begin{array}{r} 003 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ 14 \\ \hline 005 \end{array}$$

$$\begin{array}{r} 4 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 16 \\ \hline 007 \end{array}$$

$$\begin{array}{r} 6 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 2 \\ 18 \\ \hline 009 \end{array}$$

$$\begin{array}{r} 8 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ 10 \\ \hline 00 \end{array}$$

411522630

$$3 \overline{)1234567890}$$

12

003

3

04

3

15

15

006

6

07

6

18  
18  
009

009

00

0

00

$$\begin{array}{r} \overline{246913578} \\ 5 \overline{)123\ 456\ 789\ 0} \\ \underline{10} \end{array}$$

023

20

034

30

045

45

006

5

0017

15

028

$$\begin{array}{r} \downarrow \\ 25 \\ \hline 039 \\ 35 \\ \hline 040 \\ 40 \\ \hline 00 \end{array}$$

$$9 \overline{)137174210}$$

$$\begin{array}{r} 9 \\ \hline 0\bar{3}3 \end{array}$$

$$\begin{array}{r} 27 \\ \hline 064 \end{array}$$

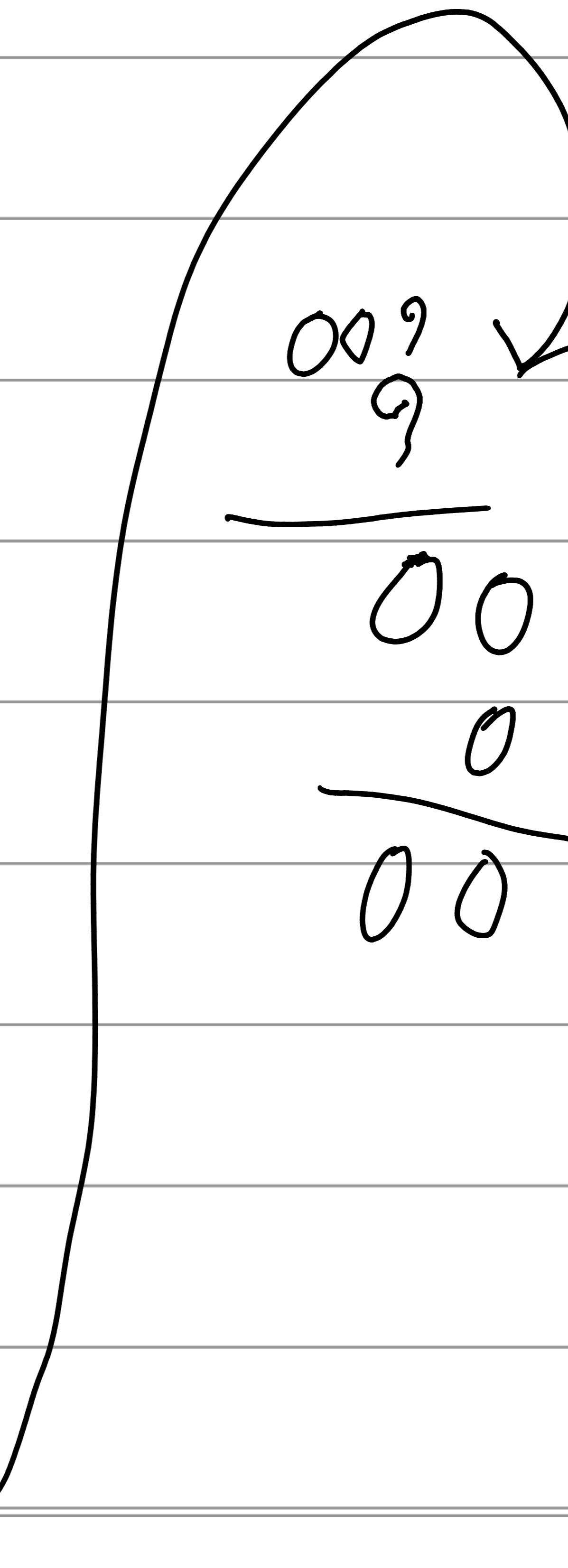
$$\begin{array}{r} 63 \\ \hline 0\bar{1}5 \end{array}$$

$$\begin{array}{r} 9 \\ \hline 66 \end{array}$$

$$\begin{array}{r} 63 \\ \hline 037 \end{array}$$

$$\begin{array}{r} 36 \\ \hline 018 \end{array}$$

$$\begin{array}{r} 18 \\ \hline 009 \end{array}$$


$$\begin{array}{r} 009 \\ \hline 00 \\ 0 \\ \hline 00 \end{array}$$

123456789  
10/1234567890

10  
—  
023

20  
—  
034

30  
—

045

40  
—

056

50  
—

067

60  
—

078

70  
—

089

80  
—

090

90

00