Names (pair) _____ Date _____

Using the Divisibility Rules

divisible by	if...
2	the ones digit is 0, 2, 4, 6 or 8
5	the ones digit is 0 or 5
10	the ones digit is 0
3	the digit sum is divisible by 3
9	the digit sum is divisible by 9

Example

Which digit is missing if $35\square$ is divisible by 9?

$3 + 5 + \square$ must be 9 or 18.

$8 + 1 = 9$, and $8 + 10$ is impossible (a digit is at most 9).

The digit is 1: the number 351.

1 ON YOUR OWN Write every digit that can replace $\square$.

$4\square 0$ is divisible by 3 and by 5: _____

$2\square 4$ is divisible by 9: _____

$7\square 5$ is divisible by 3 and by 5: _____

$\square 13$ is divisible by 3: _____

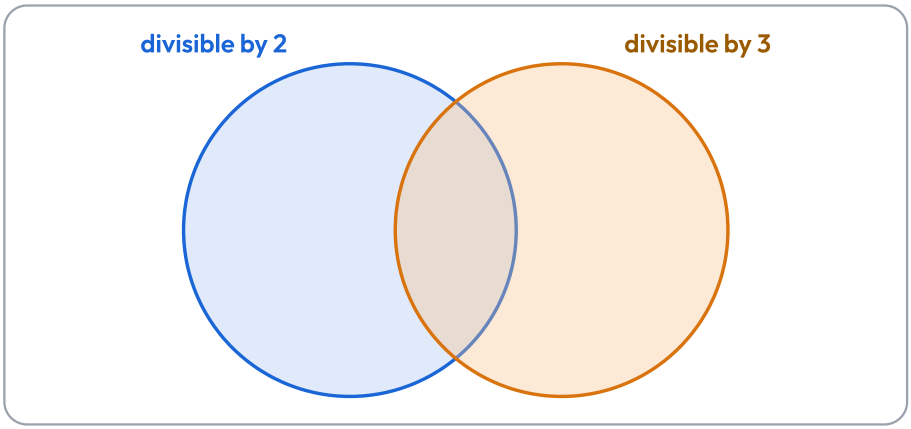
2 IN PAIRS Tick the numbers each number is divisible by.

number	2	3	5	9	10
90	☐	☐	☐	☐	☐
135	☐	☐	☐	☐	☐
222	☐	☐	☐	☐	☐
405	☐	☐	☐	☐	☐
1,260	☐	☐	☐	☐	☐
3,456	☐	☐	☐	☐	☐

Names (pair) _____ Date _____

3 ON YOUR OWN Explain to Ana why $1{,}002$ is divisible by 3 but not by 9.

4 IN PAIRS Write the numbers in the right place in the diagram:
$6, 8, 9, 12, 15, 16, 18, 21, 24, 25, 27, 30$. Which numbers are in both circles? Which number are they divisible by?



5 ON YOUR OWN Answer without dividing, then explain.

a) A teacher has 126 sweets. Can she share them equally between 9 students? **yes** / **no**

b) Can she share them equally between 5 students? **yes** / **no**

c) A cinema has 234 seats. Can they be in rows of 9? **yes** / **no**

d) Can they be in rows of 2? **yes** / **no**

The Hundred Chart app · otooly.com/hundred-chart

Guess my number, Medium level: the clues are divisibility rules. Cross out the numbers that do not fit.

★ ON YOUR OWN **Exit card.** What is the smallest four-digit number divisible by 9? ☐