Factors and Divisibility

A number is divisible by another number if the quotient is a counting number and the remainder is 0.
You can decide if a number is divisible by 2, 3, 5, 6, or 9 by using divisibility rules instead of dividing. Divisibility rules help you decide if one number is a factor of another.

Is 39 divisible by 2, 3, 5, 6, or 9?

	Divisibility Rules
$39 \div 2 = 19$ r1 $\rightarrow$ 39 is not divisible by 2.	The last digit, 9, is not even, so 39 is not divisible by 2.
$39 \div 3 = 13$ r0 $\rightarrow$ 39 is divisible by 3.	The sum of the digits, $3 + 9 = 12$, is divisible by 3, so 39 is divisible by 3.
$39 \div 5 = 7$ r4 $\rightarrow$ 39 is not divisible by 5.	The last digit, 9, is not a 0 or 5, so 39 is not divisible by 5.
$39 \div 6 = 6$ r3 $\rightarrow$ 39 is not divisible by 6.	39 is not divisible by both 2 and 3, so it is not divisible by 6.
$39 \div 9 = 4$ r3 $\rightarrow$ 39 is not divisible by 9.	The sum of the digits, $3 + 9 = 12$, is not divisible by 9, so 39 is not divisible by 9.

39 is divisible by 3.
3 is a factor of 39.

Tell whether 30 is divisible by 2, 3, 5, 6, or 9. Show your work.

1. $30 \div 2$ _____
2. $30 \div 3$ _____
3. $30 \div 5$ _____
4. $30 \div 6$ _____
5. $30 \div 9$ _____

Is 4 a factor of the number? Write yes or no.

6. 81 _____
7. 24 _____
8. 56 _____