Powers of ten and fractional powers of ten

Find the first digit of each number

10^1	10^2	10^3	10^4	10^5	10^6	10^7	10^8	10^9

Find the first digit of each number

$10^{1.1}$	$10^{1.2}$	$10^{1.3}$	$10^{1.4}$	$10^{1.5}$	$10^{1.6}$	$10^{1.7}$	$10^{1.8}$	$10^{1.9}$

Find the number $10^{1.???}$ where the first digit changes from a 1 to a 2.

Find the number $10^{1.???}$ where the first digit changes from a 2 to a 3.

Find the number $10^{1.???}$ where the first digit changes from a 3 to a 4.

Find the number $10^{1.???}$ where the first digit changes from a 4 to a 5.

Find the number $10^{1.???}$ where the first digit changes from a 4 to a 5.

Find the number $10^{1.???}$ where the first digit changes from a 6 to a 7.

Find the number $10^{1.???}$ where the first digit changes from a 7 to a 8.

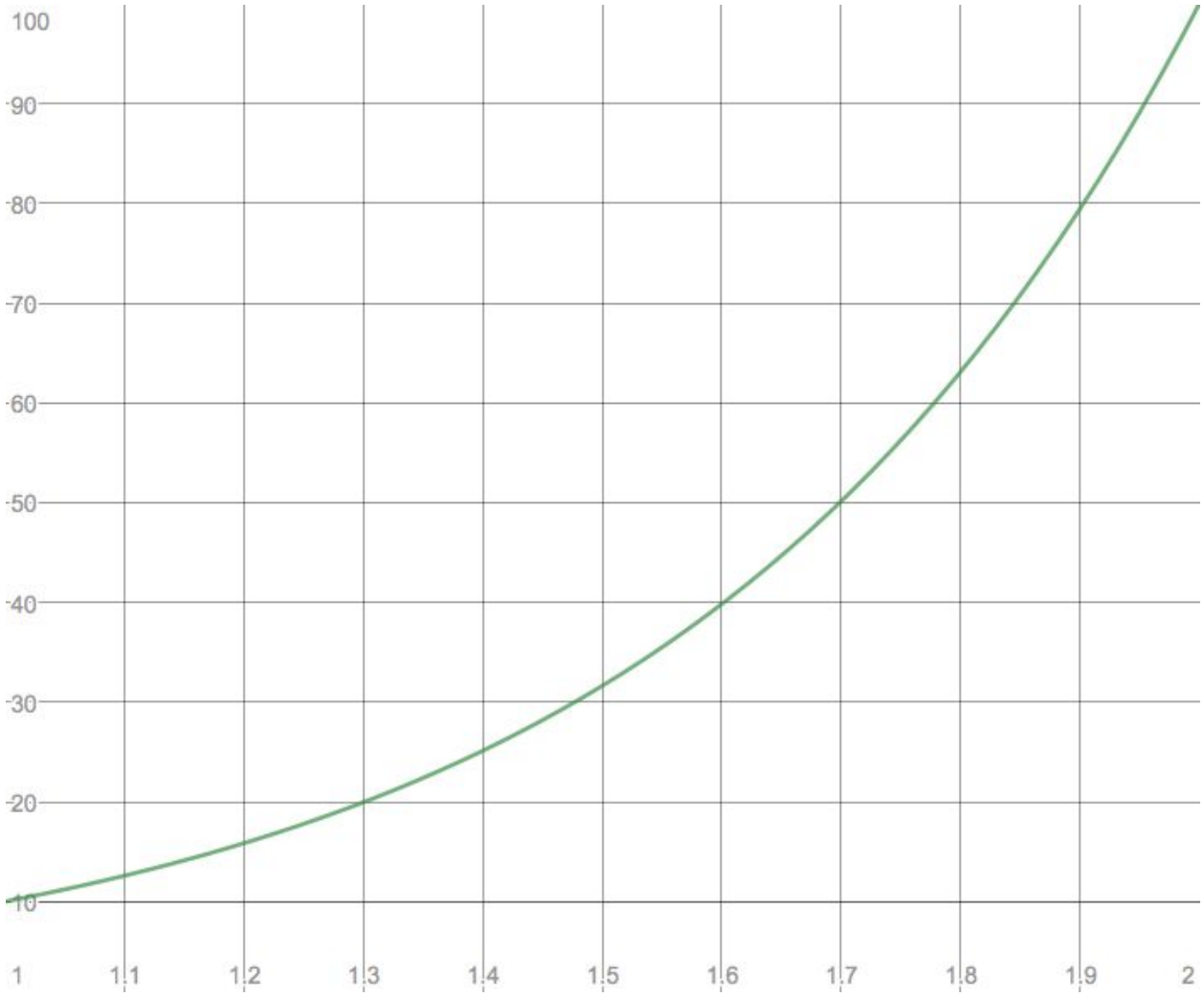
Find the number $10^{1.???}$ where the first digit changes from a 8 to a 9.

Question. What percentage of the powers of 10 start with a...

1	2	3	4	5	6	7	8	9

A visual take

Here is the graph of the function $y = 10^x$. For what values of x does the graph cross 20, 30, 40, 50, 60, 70, 80, and 90?



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