

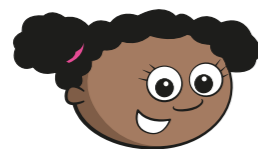
5 Write the numbers as products of their prime factors.

- a) $9 =$ _____ b) $8 =$ _____
 $18 =$ _____ $32 =$ _____
 $36 =$ _____ $64 =$ _____
 $81 =$ _____ $128 =$ _____

What do you notice about your answers?

6 Four numbers have been written on cards as the product of their prime factors.

- $2 \times 3 \times 3 \times 5$ $2 \times 2 \times 2 \times 3 \times 5$ $2 \times 3 \times 5 \times 5$ $2 \times 2 \times 3 \times 5$



The greatest number is the second card, as that has the most prime factors.

a) Do you agree with Whitney? _____

Explain your answer.

b) Write the numbers in ascending order.

7 Dani works out $450 = 2 \times 3 \times 3 \times 5 \times 5$

Use this information to write these numbers as a product of their prime factors.

- $900 =$ _____ $225 =$ _____
 $4,500 =$ _____ $150 =$ _____

8 A number has been written as the product of its prime factors.

The answer is $2^2 \times 3 \times 11^2$

Is 66 a factor of this number? _____

Explain how you know.

9 a)

f and g are prime numbers.
 $5fg = 275$ and $g > f$

What is the value of g ?

$g =$

b)

$192 = 2^a b$
 a and b are prime numbers.

Find the values of a and b .

$a =$ $b =$

c)

495 can be written as c^2de .

What are the values of c , d and e ?

$c =$ $d =$ $e =$

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$A = 5^2 \times 7^2 \times 11^3 \times 13$

$B = 5^2 \times 7^3 \times 11^3 \times 13$

How many times greater is B than A ? _____

Explain how you know.
