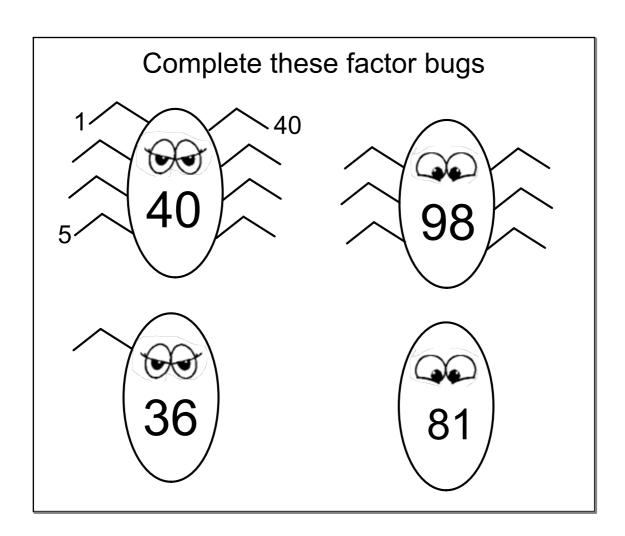
Can you find integer solutions to this;

$$\sqrt{x} + \sqrt{x + y} = y$$

What is the smallest integer with exactly 30 factors?

How many integer solutions to;

$$\frac{1}{N} - \frac{1}{M} = \frac{1}{12}$$

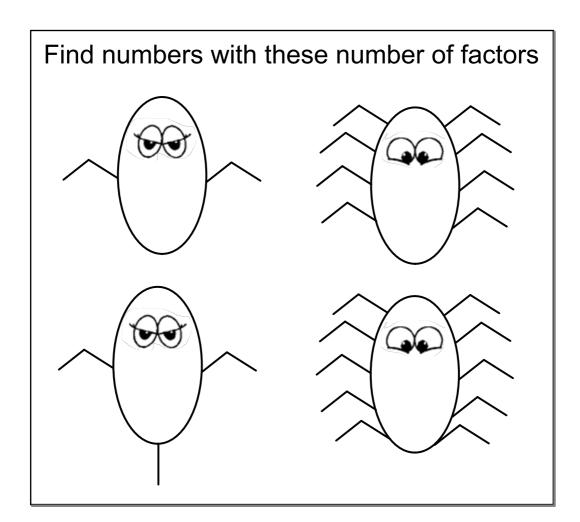


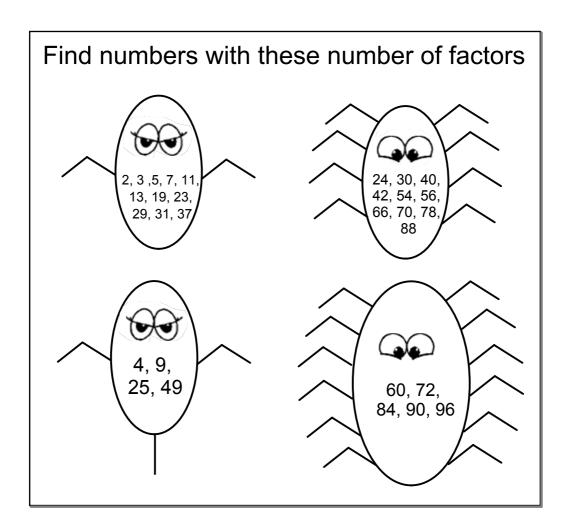
Factors

Find all the factors of;

- 1) 15
- 2) 20
- 3) 11
- 4) 25
- 5) 31
- 6) 100
- 7) 7

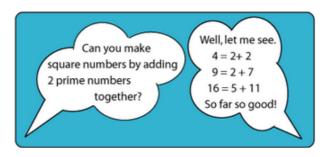
What is special about questions 3, 5, and 7?





Two Primes Make One Square

Stage: 2 * *



Try with the squares of the numbers between 4 and 20.

Did you find any square numbers which cannot be made by adding two prime numbers together?

<u>Task</u>

How can you test if a number is prime and be 100% sure?

<u>Task</u>

Find all primes between 1 - 100?

Task

How could you find all primes between 1 - 500?

What about 1 - 1 000 000?

Which of these are prime?			
6	441	10 006	9
42	\mathcal{H} Any \mathfrak{E} num		91
1.2	20 007	1987	
29	Odd number greater than 2		
7 million	Any even		Gogol
100000000000666000000000001			



Who has access?

When completed - in / out of class?

Feedback - when and how?

Related to class work or not?

