

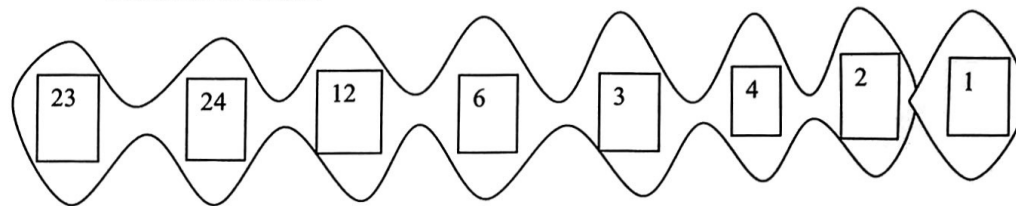
Beginners 01
39
+ 9
1/4 of it
x 3
Divide by 9
Times by itself
+ 5
+ 7
x 8
1/4 of it
Answer =

Beginners 02
300
Half of it
+ 10
Subtract 6
Times by itself
+ 7
+ 11
Times by itself
Half of it
Half of it
Answer =

Beginners 03
Twenty
1/4 of this
x 8
+ 2
Half of it
+ 3
Times by itself
+ 9
- 30
1/4 of this
Answer =

# Caterpillars.

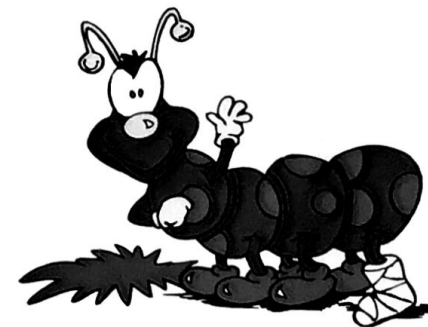
Can you make the pattern on the caterpillar by adding 1 when the number is odd or by halving the number when the number is even?



The caterpillar starting with 23 has 8 segments.

- ✓ Can you find the number between 1 and 100 that forms the longest caterpillar?
- ✓ Is it possible to predict which number less than 200 will create the longest caterpillar?
- ✓ Which number less than 1000 will make the longest caterpillar?

**Investigate.**



## Activities

**1** Answer these questions, by first changing one fraction to an equivalent one so that the two fractions have a common denominator.

a  $\frac{4}{9} + \frac{1}{3} =$  \_\_\_\_\_

b  $\frac{1}{4} + \frac{3}{8} =$  \_\_\_\_\_

c  $\frac{3}{10} + \frac{3}{5} =$  \_\_\_\_\_

d  $\frac{1}{12} + \frac{2}{3} =$  \_\_\_\_\_

e  $\frac{8}{9} - \frac{2}{3} =$  \_\_\_\_\_

f  $\frac{11}{12} - \frac{5}{6} =$  \_\_\_\_\_

g  $\frac{9}{10} - \frac{2}{5} =$  \_\_\_\_\_

h  $\frac{6}{7} - \frac{5}{14} =$  \_\_\_\_\_

**2** Add these fractions and give your answers as mixed numbers.

a  $\frac{3}{4} + \frac{7}{8} =$  \_\_\_\_\_

b  $\frac{5}{6} + \frac{2}{3} =$  \_\_\_\_\_

c  $\frac{3}{10} + \frac{4}{5} + \frac{1}{10} =$  \_\_\_\_\_

d  $\frac{7}{12} + \frac{1}{6} + \frac{1}{3} =$  \_\_\_\_\_