Entrance to year 1 sample questions (no calculator)

Number

Q1.

(a) Work out $1\frac{1}{5}+\frac{5}{6}$ (b) Work out $\frac{4}{7}\times$ £56 (c) Work out $\frac{\frac{3}{8}\div\frac{3}{4}}{2}$ (d) Work out 27×45

Q2.

(a) Write down all the factors of 24.

(b) Write down the first 6 prime numbers.

(c) Write 32.54 kg in grams

Q3.

(a) Find 30% of \$80

(b) write down the smallest number which is a multiple of 6 and 8

(c) write 3.5859472 correct to 2 decimal places

Q4.

The price of a dress is reduced by 20% and now costs 400 Kč . How much did the dress cost before it was reduced?

Q5.

On a farm, the ratio of cows to sheep is 3:7. There are 210 cows on the farm, how many sheep are there?

Q6.

Calculate

$$\frac{2^4}{5^2}$$

(a) giving your answer as a fraction,

(b) giving your answer as a decimal.

Q7.

Which of the following is the longest period of time?

A 3002 hours B 125 days C 17.5 weeks D 4 months E $\frac{1}{3}$ of a year

Geometry

Q1.
Find the value of x in the following diagrams:

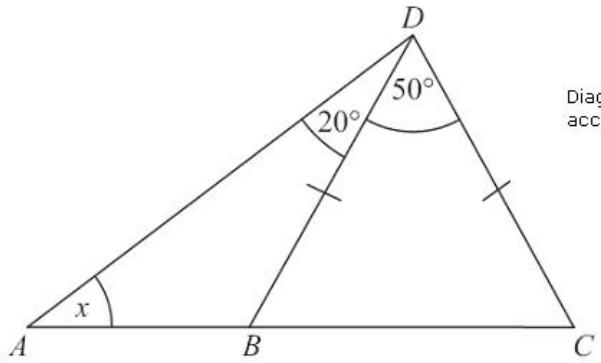
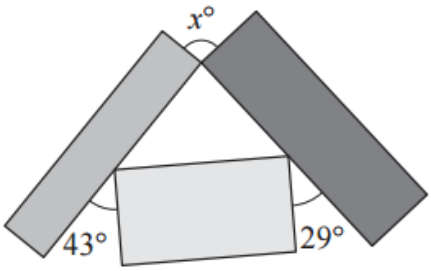


Diagram **NOT** accurately drawn



Q2.

Mrs Kunal's garden is in the shape of a rectangle.
Part of the garden is a patio in the shape of a triangle.
The rest of the garden is grass.

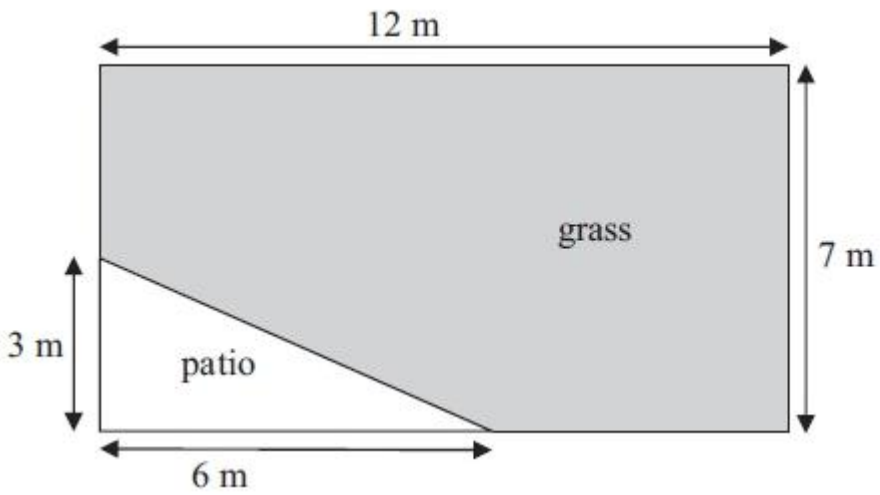


Diagram **NOT** accurately drawn

a) Find the area of the grass

b)

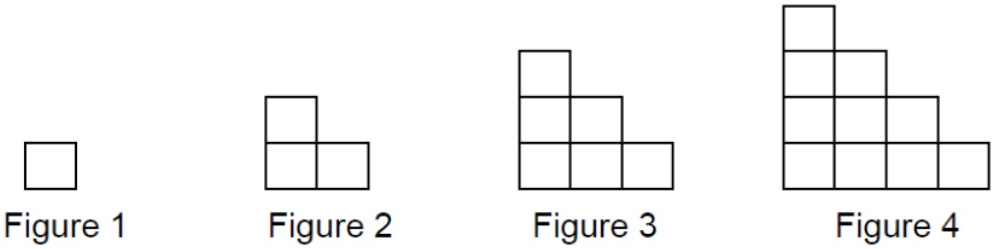
Mrs Kunal wants to spread fertiliser over all her grass.

One box of fertiliser is enough for 32 m^2 of grass.

How many boxes of fertiliser will she need?
You must show your working.

Algebra

Q1.



a) How many squares would be in Figure 5?

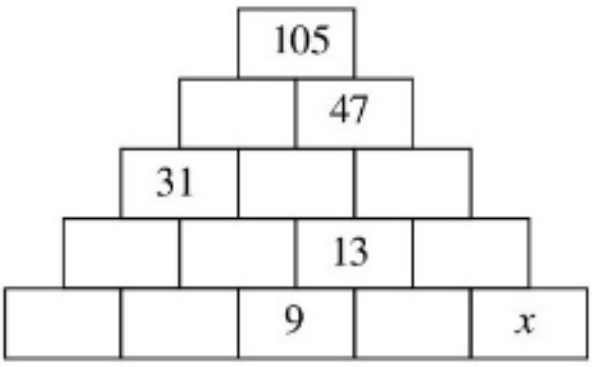
b) Which Figure has 28 squares?

c) In which two Figures would the total number of squares add up to 100?

Q2.

A farmer has some chickens and rabbits in a field. Altogether there are 16 heads and 44 feet. How many chickens and how many rabbits are there?

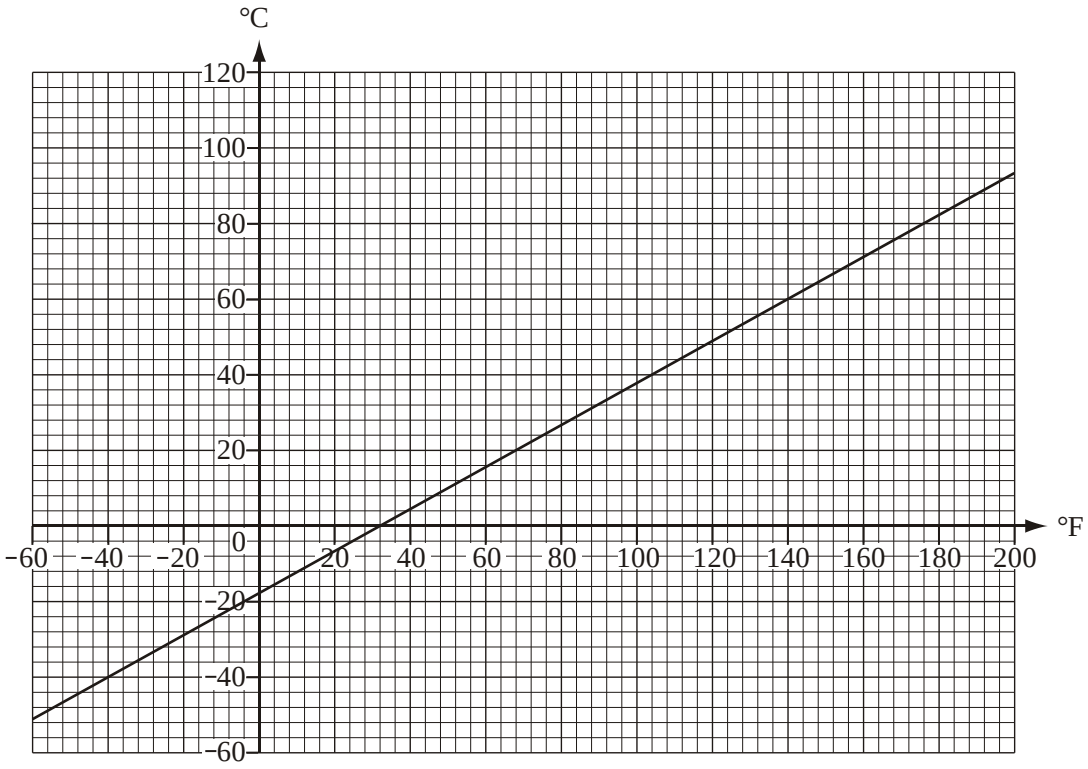
Q3.



In this pyramid, each rectangle is the sum of the two rectangles below it. Find the value of x.

GRAPHS

The graph drawn below shows the conversion of temperatures in degrees Fahrenheit (°F) to temperatures in degrees Celsius (°C).



(a) The temperature of a room is 20°C. What is the temperature in Fahrenheit?

Answer (a) ……

(b) A liquid has a boiling point of 176°F. What is the temperature in Celsius?

Answer (b) ……

(c) Find *T* when *T*°C = *T*°F.

Answer (c) T = ……

DATA

Q1.

Matthew had a score of 72% in his mathematics test. The average mark for the mathematics and physics tests was 78%. What score did Matthew have in the physics test?