

# Mathematics

Delprov B

Årskurs

6

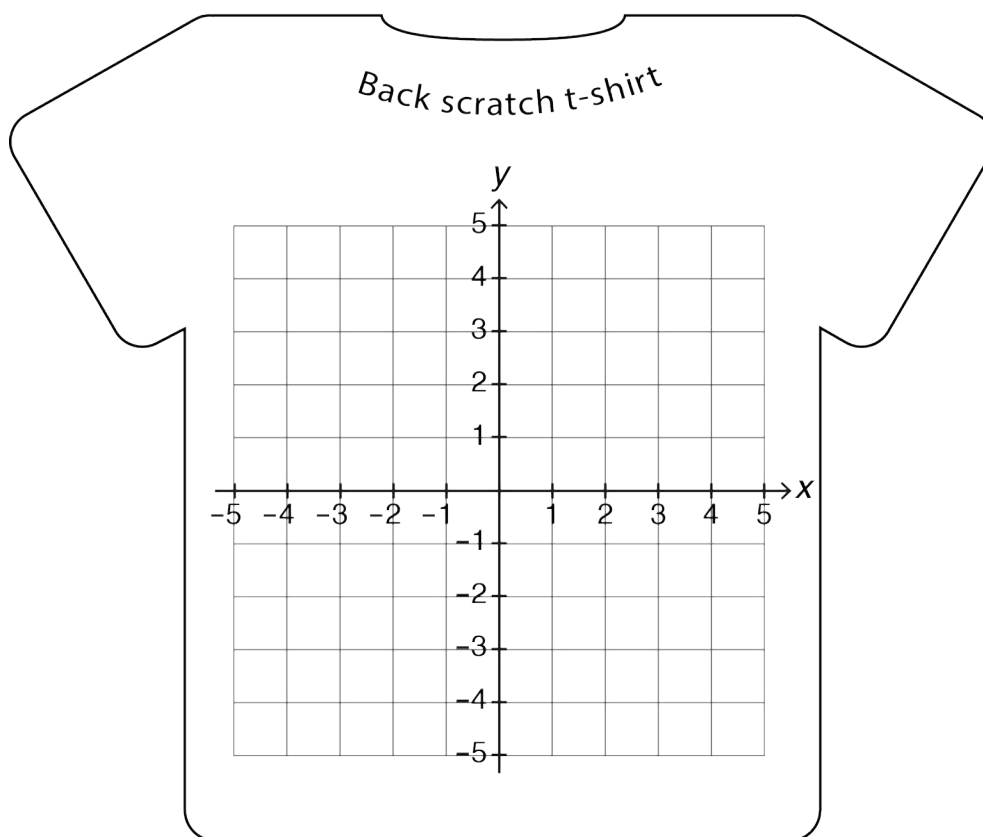
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Elevens namn och klass/grupp



1. There are 172 fruits in a box. (2/0/0)  
There are bananas, plums, apples and oranges.  
There is the same number of each kind of fruit.  
How many fruits of each kind are there in the box?  
*Show your working.*

2. The class is making t-shirts with a system of coordinates on the back.



- a) Mark the point with coordinates  $(1, 3)$  with an x. (1/0/0)
- b) Mark the point with coordinates  $(-4, 2)$  with an x. (1/0/0)

3. Solve the tasks and show your working.  
Use the grid if you want.

a)  $4\,375 + 7\,683 =$

(2/0/0)

b)  $831 - 294 =$

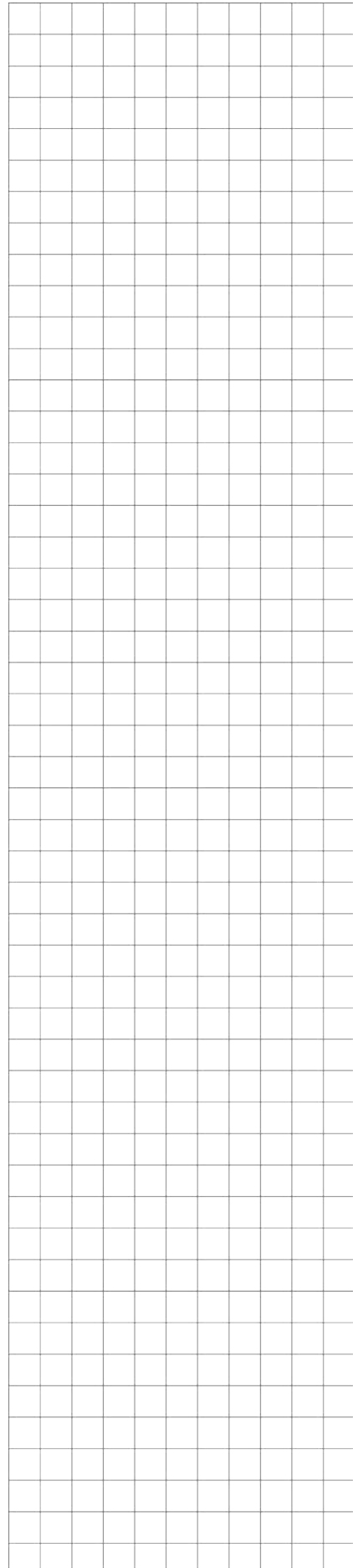
(2/0/0)

c)  $346 \times 8 =$

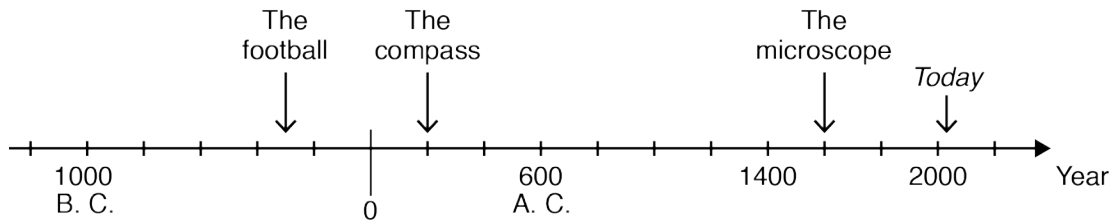
(2/0/0)

d)  $\frac{8\,742}{6} =$

(1/1/0)



4.



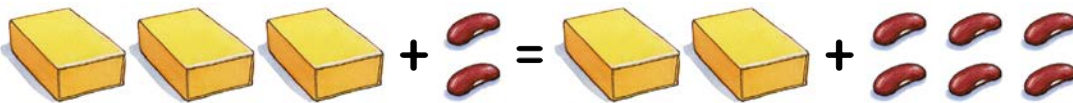
Use the time line. In which year was the invention of

a) the compass? Answer: \_\_\_\_\_ (1/0/0)

b) the microscope? Answer: \_\_\_\_\_ (1/0/0)

c) the football? Answer: \_\_\_\_\_ (0/1/0)

5.



There are the same number of beans in each box.  
How many beans are there in one box?

Answer: \_\_\_\_\_ (1/0/0)

6. Wilma wants to purchase a new game.  
She has been saving SEK 75 each month. (2/0/0)  
After 6 months, she has saved up half of what the game costs.  
How much will the game cost?  
*Show your working.*

7. Write the missing numbers so that each equation is correct.

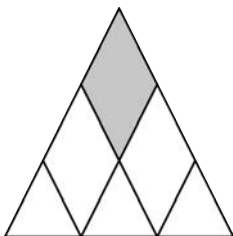
a)  $300 - \underline{\hspace{2cm}} = 167$  (1/0/0)

b)  $2 \times 42 = 4 \times \underline{\hspace{2cm}}$  (1/0/0)

c)  $3 \times 4 - 5 = 3 \times \underline{\hspace{2cm}} - 8$  (0/1/0)

d)  $\frac{56}{8} = \underline{\hspace{2cm}} - 10$  (0/1/0)

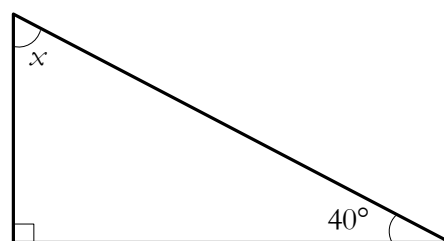
8. What fraction of the triangle is grey? (0/1/0)



Answer: \_\_\_\_\_

9. What is the size of angle  $x$  in the triangle?  
*Show how you worked out the angle.*

(1/1/0)



10. Computers use the binary number system.  
In the binary number system all numbers are written using the digits 0 and 1.

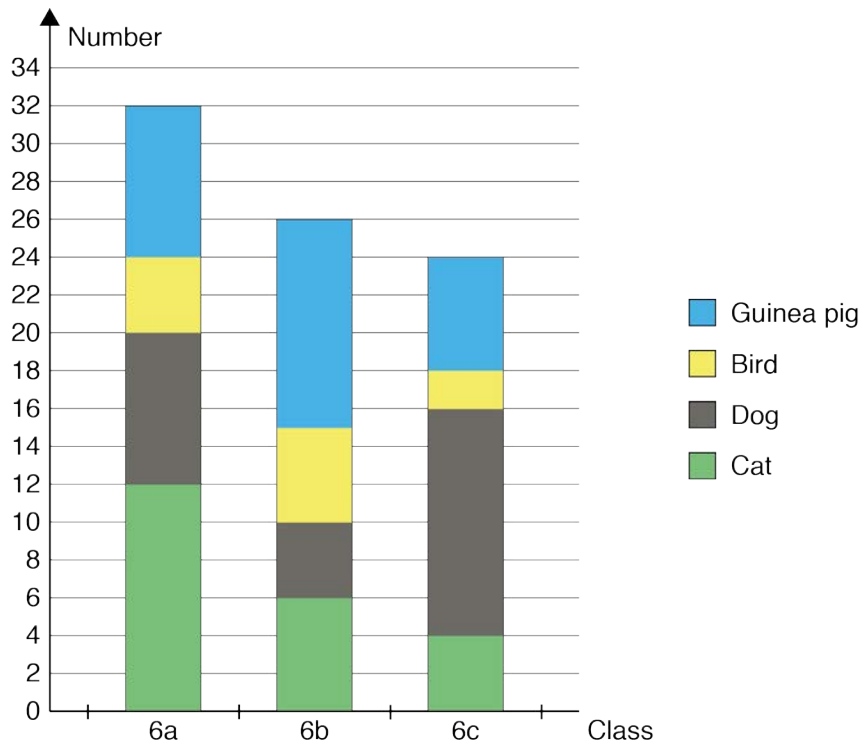
The table shows you how to write different numbers using the binary number system.

Our number system	Binary number system				
0					0
1					1
2				1	0
3				1	1
4			1	0	0
5					
6			1	1	0
7			1	1	1
8		1	0	0	0
9		1	0	0	1
10		1	0	1	0
11		1	0	1	1
12					



- a) How do you write 5 using the binary number system? (1/0/0)  
*Fill in the table.*
- b) How do you write 12 using the binary number system? (0/1/0)  
*Fill in the table.*

11. The pupils vote on their favourite animal.  
The diagram shows the results from three classes.



- a) How many pupils in class 6b voted for dog? Answer: \_\_\_\_\_ (1/0/0)
- b) Which percentage of the pupils in class 6c voted for guinea pig?  
*Show your working.* (0/2/0)
- c) Hugo says that class 6a and class 6c have the same share of votes for guinea pig.  
Is he right?  
*Explain your answer.*



12. Which two numbers have the same value? (0/1/0)  
*Circle your two answers.*

$$\frac{6}{100} \quad 40\% \quad 60\% \quad 0.04 \quad \frac{3}{5} \quad 0.35$$

13. One of the equations has the solution  $x = 12$ . Which one? (0/1/0)  
*Circle your answer.*

$$18 - 6 = x + 12 \qquad 12 = \frac{24}{x} \qquad 7 \times 4 = 2 \times x$$

$$\frac{x}{3} + 3 = 7 \qquad x + 1 = 13 - 1$$

14. Maja has SEK 30 less than Samira. Maja has SEK  $m$  and Samira has SEK  $s$ . Which formula is correct? (0/0/1)  
*Circle your answer.*

$$m = 30 - s \qquad m = 30 \times s \qquad m = 30 + s$$

$$m + 30 = s \qquad m - 30 = s$$

15. You know that  $\frac{235}{50} = 4.7$ . So how much is  $\frac{235}{0.5}$ ? (0/0/1)

Answer: \_\_\_\_\_





