

MATHEMATICS TEST
Year 9 – Part B1
Spring 2004

The contents of this test material must remain *secret* until June 11, 2004.

This part consists of short answer questions to be solved without the calculator. A correct answer gives 1 “Pass” point (g) (1/0) or 1 “Pass-with-distinction” point (vg) (0/1).

Time: 80 minutes for Part B1 and Part B2 together. We recommend that you use at most 30 minutes for Part B1. You may not use your calculator until you have handed in Part B1.

Only the answers are required. Write your answers in the spaces provided on the question page.

You can save time by doing mental arithmetic as much as possible.

Name: _____

School: _____ Class: _____

Birth date: Year _____ Month _____ Day _____

Girl ☐ Boy ☐

1. Which of the following numbers is the *smallest one*?
Circle your choice.
- 2.9 2.98 2.998 2.889 2.89
- (1/0)

2. Calculate $1.35 - 0.5$ Answer: _____ (1/0)

3. Calculate $\frac{9\,000}{3\,000}$ Answer: _____ (1/0)

4. Which of the following numbers is equal to one fifth?
Circle your choice.
- 0.5 1.5 0.05 0.2 0.15
- (1/0)

5. Calculate $0.2 \cdot 140$ Answer: _____ (1/0)

6. Show in some way how you calculate $21 \cdot 302$
without the calculator.

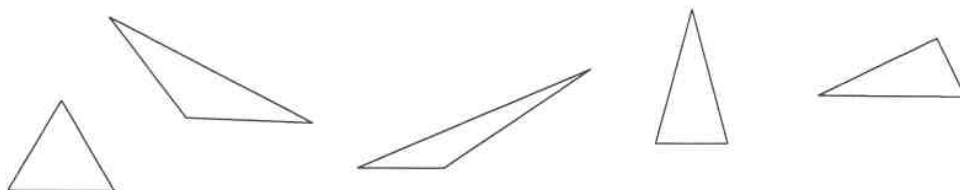
Show here:

Answer: _____ (1/0)

7. Calculate $15 - 5 \cdot 2$ Answer: _____ (1/0)

8. State a number in *fractional form* that is greater
than $\frac{3}{4}$ but less than 1. Answer: _____ (1/0)

9. Which of these figures is an *isosceles, obtuse-angled* triangle?
Circle your choice.



(1/0)

10. A motorbike travels 18 km in 15 min.
Find the average speed in km/h.

Answer: _____ km/h (1/0)

11. A package of biscuits that weighs 400 g costs 18 kr.
What is the price per kilo?

Answer: _____ kr/kg (1/0)

12. Solve the equation $25 - 5x = 10$

Answer: $x =$ _____ (1/0)

13. Find the value of $17 - 2x$ if $x = 5$

Answer: _____ (1/0)

14. Which of the following calculations gives a number that is greater than 1? Circle your choice.

$$\frac{1}{3} / \frac{1}{2}$$

$$\frac{1}{3} \cdot 2$$

$$\frac{1}{2} \cdot \frac{1}{3}$$

$$\frac{1}{2} / \frac{1}{3}$$

$$\frac{1}{3} / 2$$

(0/1)

15. One of the following numbers is equal to 2^5 . Which one?
Circle your choice.

2.5

10

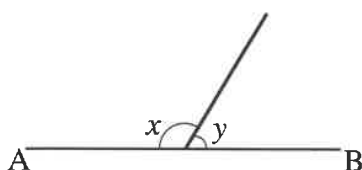
32

64

200 000

(0/1)

16. In the figure, AB is a straight line. Angle x is twice as large as angle y . Find the size of angle y ?



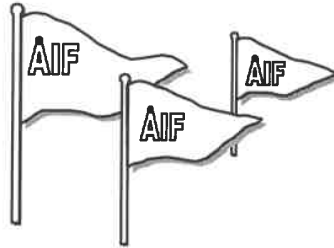
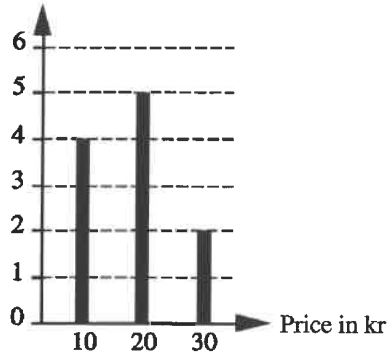
Answer: $y =$ _____ ° (0/1)

17.
Find the length
of the side of the cube.

A cube has the volume 27 cm^3 .

Answer: _____ cm (0/1)

18. No of flags sold



Martin sold flags at three different prices for the home game for Åshöjdens IF. The diagram shows how many of each he sold. How many crowns (kr) did he get?

Answer: _____ kr (0/1)

19. Erik buys three soda pops that cost a kr/each. Write an expression for the change he gets back if he pays with a 100 kr bill.

Answer: _____ kr (0/1)

20. Alex weighs a kg and Björn weighs b kg. Which of the following statements can be expressed as $a + 0.2a = b$? Circle your choice.

(0/1)

Björn weighs 0.2 kg more than Alex. Alex weighs 0.2 kg more than Björn.

Alex weighs 20 % more than Björn. Björn weighs 20 % more than Alex.