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**For this material the secrecy is valid until the end of June the year 2002.**

**NATIONAL TEST  
IN MATHEMATICS COURSE A  
SPRING 2002**

**Part I**

**Instructions**

- Test period 180 minutes for Part I and Part II as a whole. We recommend that you use at the most 30 minutes to work with Part I. You must not use the calculator before you have handed in Part I.
- Tools Formula sheet and ruler.
- Part I Part I is composed of short answer items, which shall be solved without the use of a calculator. A correct answer gives 1 g-point (1/0) (Pass level) or 1 vg-point (0/1) (Pass with distinction level).
- Mark limits The test gives totally (Part I + Part II) at the most 59 points, out of which 26 vg-points. To pass the test you must have at least 18 points and to get the test character Pass with distinction you must have at least 33 points out of which at least 12 points on Pass with distinction level.

Name: \_\_\_\_\_ School: \_\_\_\_\_

Adult education/study program: \_\_\_\_\_



1.  $4 + 6 \cdot 3 =$  Answer: \_\_\_\_\_ (1/0)

2. What is the half of  $1\frac{1}{2}$ ? Answer: \_\_\_\_\_ (1/0)

3. Write a whole number in the square so that the fraction gets a value between 2 and 3.  
Answer:  $\frac{\square}{8}$  (1/0)

4. Andreas has 4 km to school. How many minutes does it take for him to bike to the school if he keeps an average speed of 16 km/h? Answer: \_\_\_\_\_ min (1/0)

5. The table below shows the distances in kilometre between some Swedish towns.

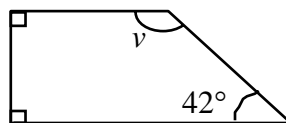
<i>Borås</i>					
421	<i>Falun</i>				
489	90	<i>Gävle</i>			
262	225	315	<i>Karlstad</i>		
436	231	181	311	<i>Stockholm</i>	
250	176	229	115	196	<i>Örebro</i>

How far is it according to the table between Falun and Karlstad? Answer: \_\_\_\_\_ km (1/0)

6.  $a = 5$  and  $b = 2$   
Find the value of  $3a - b$  Answer: \_\_\_\_\_ (1/0)

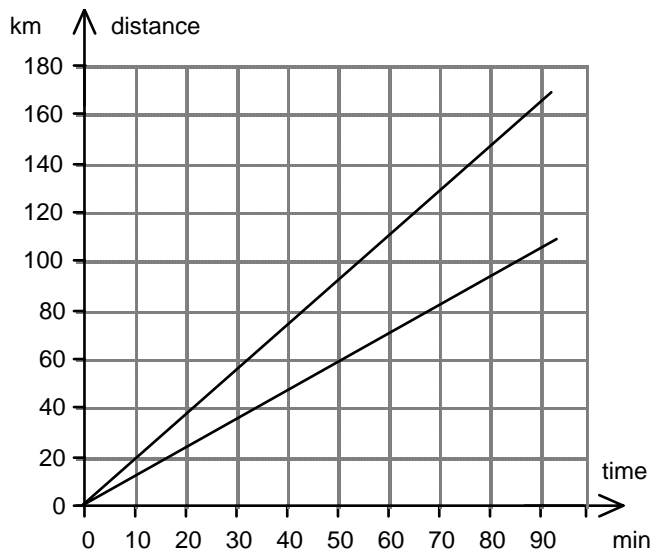
7. Investigate the pattern and give the number that is omitted.  
3            5            9            15            \_\_\_\_\_            33 (1/0)

8. Find the measure of the angel  $v$ .



Answer: \_\_\_\_\_ ° (1/0)

9. This graph shows how far one has travelled in a certain time at a speed of 70 km/h respectively 110 km/h.



- a) Find the time it takes to travel 30 km at the speed of 70 km/h.

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

- b) A distance takes 50 min to drive at the speed of 110 km/h. How much longer will the travelling time be at the speed of 70 km/h?

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

10. You know that  $3x + 4y = 27$   
Then how much is  $6x + 8y$ ?

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

11. A jacket costs 980 kr. The price is first raised with 8 % and then with another 6 %. Which one of the calculations gives you the price of the jacket after both price increases. Circle your answer.

$980 \cdot 0.08 \cdot 0.06$

$980 \cdot 1.8 \cdot 1.6$

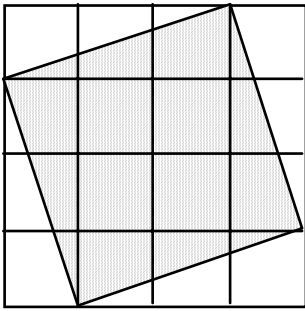
$\frac{980}{0.08 \cdot 0.06}$

$980 \cdot 1.08 \cdot 1.06$

$980 + 980 \cdot 0.08 + 980 \cdot 0.06$

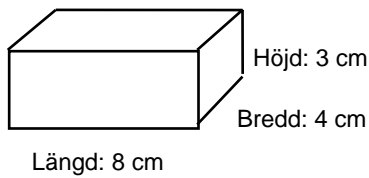
(0/1)

12. How large part of the figure is shaded?



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

13. You are to increase the length, width *or* height of this cuboid with 1 cm. Which one of the measures do you have to change so that the volume will change as little as possible?



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

14. Calculate the value of the expression  $\sqrt{9p^2}$  for  $p = 3$

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

15. Solve the equation  $\frac{x-0.2}{0.1} = 1$

Answer:     $x =$  \_\_\_\_\_ (0/1)