

# Mathematics

Delprov B

1a

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Elevens namn och klass/grupp



## Instructions – Part B

**Time for the test** 60 minutes for Part B.

**Aids** Allowed aids on Part B are formula sheet and ruler.

**Tasks** This part consists of tasks to be solved without using digital devices. Answers and solutions are to be written in the test booklet. Some of the tasks require working, which is to be shown in the figure and the box next to the task. For the other tasks only the answer is required. The maximum number of points that you can get for your answer/solution is shown after each task.

**Grading limits** The test (Part A–D) gives a total maximum of 80 points.

Limit for test grade

E: At least 21 points.

D: At least 34 points of which at least 11 points at level C or higher.

C: At least 45 points of which at least 19 points at level C or higher.

B: At least 55 points of which at least 6 points at level A.

A: At least 64 points of which at least 10 points at level A.

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

Date of birth: \_\_\_\_\_

Program: \_\_\_\_\_ Class: \_\_\_\_\_

Illustration: Jens Ahlbom



1. Calculate  $4 + 2 \cdot 32$

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

(1/0/0)

2. Which of the following numbers is the best approximation of  $6.35 \times 3.2$ ?  
Circle your answer.

0.203

2.03

20.3

203


2030

(1/0/0)

3. Kalle is going to bake cupcakes according to the recipe below, but discovers that he only has 1 dl of sugar. According to the recipe, approximately how many cupcakes can he bake with 1 dl of sugar?

Recipe for 25 cupcakes

- 100 g butter
- 3 eggs
- 1.5 dl sugar
- 2 dl milk
- 4 dl flour
- 2 tsp baking powder
- 1 tsp vanilla sugar
- 1 pinch of salt



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

(1/0/0)

4. Solve the equation  $3(x + 1) = 60$

Answer:  $x =$  \_\_\_\_\_

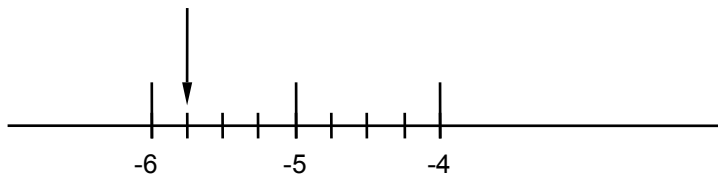
(1/0/0)

5. You know that  $\frac{1980}{24} = 82.5$ . Then what is  $\frac{1980}{2.4}$ ?

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

(1/0/0)

6. Which number is the arrow pointing to?



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

(1/0/0)

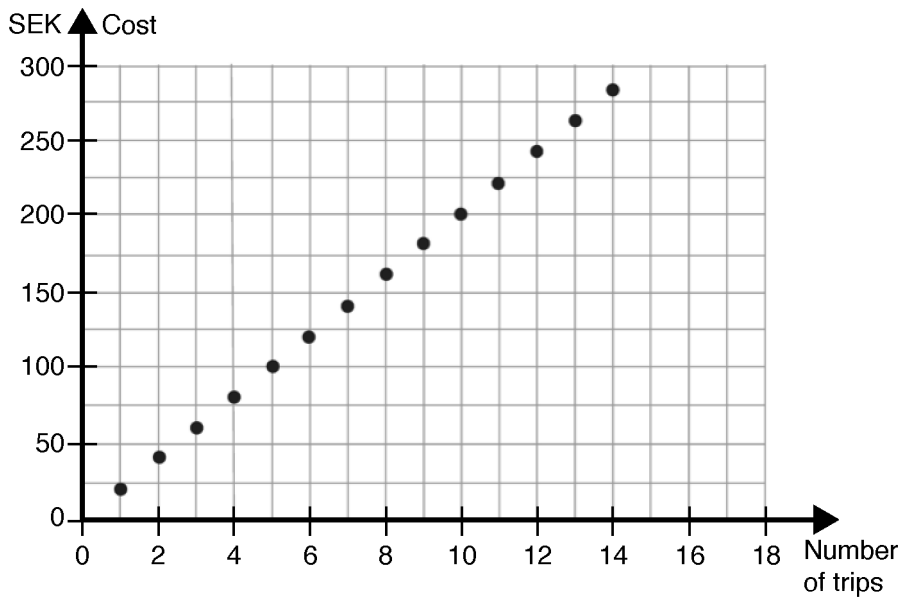
7. What number is exactly 0.1 greater than 3.96?

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

(1/0/0)

8. Elin has started in a new school and has to go to and from school by bus every day. The diagram shows the cost of single trips, i.e. for a trip to or from school.

a) A monthly bus pass costs SEK 230. What is the minimum number of single trips Elin has to make in order for it to be cheaper for her to buy a monthly bus pass?



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

b) What does a single trip cost according to the diagram? Motivate your answer.

(1/1/0)

9. Potting soil is packed into bags that contain 5 litres.  
How many bags will one square metre of soil fill?      Answer: \_\_\_\_\_      (0/1/0)

10. The original price of a product is SEK 2 000. The product's value increases by 5 % per year.  $y$  is the product's price and  $x$  is the number of years after the purchase. Which of the following relations describes the price development?  
Circle your answer.

$y = 1.05 \times x + 2000$        $y = 2000 \times 1.05^x$

$y = 2000 \times 0.95^x$        $y = 2000 \times 1.05x$        $y = 2000(x + 5)$       (0/1/0)

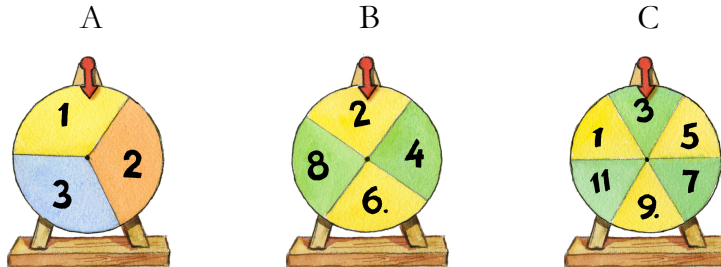
11. Determine the value of  $3x - y$  if  $x = 0.2$  and  $y = -0.2$       Answer: \_\_\_\_\_      (0/1/0)

12. A triangle has a base that is 3 cm longer than its height.  
Draw a figure and write an algebraic expression for the triangle's area.  
Show your solution.

(0/1/1)



13. Svante is going to spin the three wheels A, B and C. What is the probability that the sum of what the three wheels will show is going to be odd? Show your solution.



(0/1/2)

14. The proportion of gold in a mine is 1.2 g gold per tonne of ore. State the proportion of gold in per mille.

Answer: \_\_\_\_\_ ‰

(0/0/1)





# Test result – Student summary

National test in mathematics 1a spring 2015

Name:	Test grade:
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	E-points		C-points		A-points		Total	
	Your score	Maximum score	Your score	Maximum score	Your score	Maximum score	Your score	Maximum score
<b>Part A</b>		4		5		4		13
<b>Part B</b>		9		6		4		19
<b>Part C</b>		3		6		4		13
<b>Part D</b>		17		13		5		35
<b>Total</b>		<b>33</b>		<b>30</b>		<b>17</b>		<b>80</b>

Part A	E	C	A	Score	Comment
Method and carrying through	+E <sub>B</sub> +E <sub>M</sub>	+C <sub>B</sub> +C <sub>M</sub>	+A <sub>M</sub>		
Reasoning	+E <sub>R</sub> +E <sub>R</sub>	+C <sub>R</sub> +C <sub>R</sub>	+A <sub>R</sub> +A <sub>R</sub>		
Communication		+C <sub>K</sub>	+A <sub>K</sub>		
<b>Total</b>	<b>4</b>	<b>5</b>	<b>4</b>		

Part C	E	C	A	Score	Comment
Method and carrying through	+E <sub>B</sub> +E <sub>P</sub> +E <sub>PL</sub>	+C <sub>B</sub> +C <sub>PL</sub> +C <sub>PL</sub>	+A <sub>PL</sub> +A <sub>M</sub>		
Reasoning		+C <sub>R</sub> +C <sub>R</sub>	+A <sub>R</sub>		
Communication		+C <sub>K</sub>	+A <sub>K</sub>		
<b>Total</b>	<b>3</b>	<b>6</b>	<b>4</b>		

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### Test grade

The test grade sums up the knowledge that the student has shown on the national test. The course grade does not have to be the same as the test grade since the course grade is based on all the knowledge that the student has shown during the course.

Comments:
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The form is available to download at [www.su.se/primgruppen](http://www.su.se/primgruppen)