

# Mathematics

## Part B

Student Booklet

# 1a

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Elevens namn och klass/grupp



## Instructions – Part B

**Time for the test** 90 minutes for Part B and Part C. You will get both parts at the same time. We recommend that you use no more than 45 minutes for work on Part B. When you have handed in your answers to Part B you may start using digital devices.

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

**Tasks** This part consists of tasks to be solved without using digital devices. 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 84 points.

Limit for test grade

E: At least 19 points.

D: At least 34 points of which at least 10 points at level C or higher.

C: At least 44 points of which at least 18 points at level C or higher.

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

A: At least 62 points of which at least 10 points at level A.

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

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

Secondary program: \_\_\_\_\_ Class: \_\_\_\_\_

Illustration: Jens Ahlbom

1. What change factor corresponds to a price increase of 40 %?

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

2. Roughly how big is the area of the figure?  
Circle your answer.



3 cm<sup>2</sup>    3 dm<sup>2</sup>    6 cm<sup>2</sup>    6 dm<sup>2</sup>    9 cm<sup>2</sup>    9 dm<sup>2</sup> (1/0/0)

3. What number should be written in the box to make the equality valid?

$$8.07 + \boxed{\phantom{00}} + 2.33 = 12.45$$

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

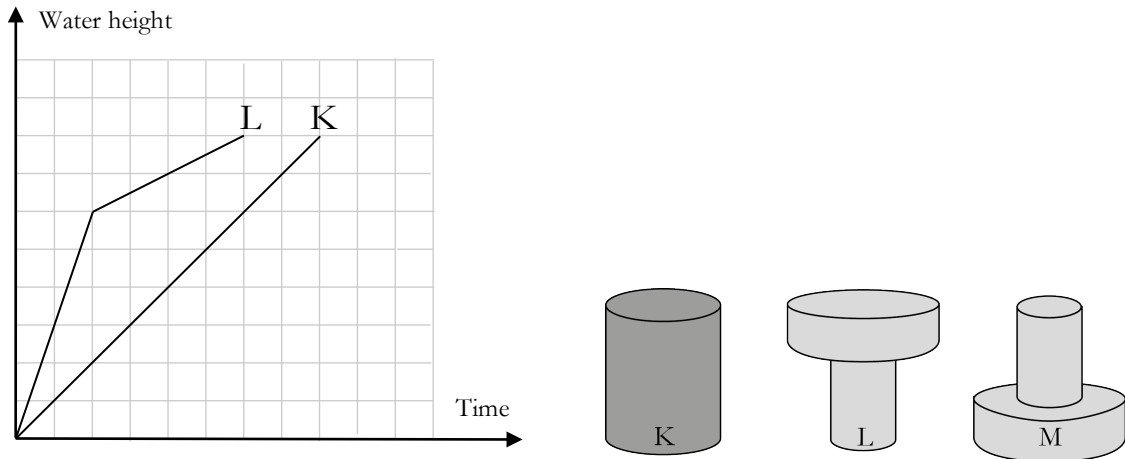
4. Which of the following numbers is the best approximate value of  $6.35 \cdot 3.2$ ?  
Circle your answer.

0.2    2    20    200    2000 (1/0/0)

5. Ali changes SEK 750 into Thai Baht (THB) and gets 3 000 THB. Katarina changes SEK 500 at the same exchange rate. How much does she get?

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

6. The containers K, L and M, all with the same height, are filled with water at a constant rate. The graphs show how the height of the water increases for containers K and L.



- a) Why does the water rise faster at the start in container L than in container K? Show your reasoning in the box.

(1/0/0)

- b) Draw the graph for container M in the coordinate system above.

(2/1/0)

7. Leo tosses a coin twice in a row. What is the probability that he, regardless of order, will get exactly one head and one tail?



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

(0/1/0)

8. Azin is about to pack spices in bags. There should be 25 g in each bag. How many bags are needed to pack 2 kg of spices?

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

9. You are to drive a distance of 60 kilometres. What will the time gain in minutes be, if your average speed increases from 90 km/h to 100 km/h? Show your solution in the box.

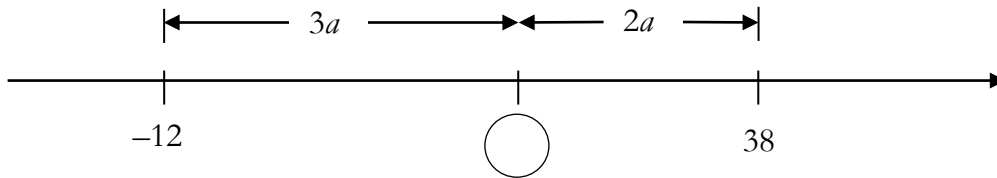


Answer: \_\_\_\_\_ min (1/2/0)

10. The base of a triangle is 3 cm longer than its height. Draw a figure and write an expression for the area of the triangle. Show your solution in the box.

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

11. Which number should be written in the circle?  
Show your solution in the box.



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

(0/1/1)

12. In the following expressions  $a$  and  $b$  are lengths. Which one of the following expressions could be a volume? Circle your answer.

$\frac{a}{b}$

$a^2b$

$ab^3$

$a^2 + b^2$

$2a + 2b$

(0/0/1)

# Resultatredovisning – Sammanfattning Elev

Nationellt kursprov i matematik, kurs 1a vt 2013

Namn:	Provbetyg:
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	E-poäng		C-poäng		A-poäng		Totalt	
	Din poäng	Max-poäng	Din poäng	Max-poäng	Din poäng	Max-poäng	Din poäng	Max-poäng
<b>Del A – muntlig del</b>		4		5		5		14
<b>Del B</b>		10		7		3		20
<b>Del C</b>		3		4		4		11
<b>Del D</b>		16		18		5		39
<b>Totalt</b>		<b>33</b>		<b>34</b>		<b>17</b>		<b>84</b>

Del A – muntlig del	E	C	A	Poäng	Motivering
Metod och genomförande	+E <sub>PL</sub> +E <sub>M</sub>	+C <sub>B</sub> +C <sub>M</sub>	+A <sub>B</sub> +A <sub>M</sub>		
Resonemang	+E <sub>R</sub> +E <sub>R</sub>	+C <sub>R</sub> +C <sub>R</sub>	+A <sub>R</sub> +A <sub>R</sub>		
Kommunikation		+C <sub>K</sub>	+A <sub>K</sub>		
<b>Summa</b>					

Del C	E	C	A	Poäng	Motivering
Metod och genomförande	+E <sub>PL</sub> +E <sub>PL</sub>	+C <sub>P</sub>	+A <sub>PL</sub> +A <sub>P</sub>		
Resonemang	+E <sub>R</sub>	+C <sub>R</sub> +C <sub>R</sub>	+A <sub>R</sub>		
Kommunikation		+C <sub>K</sub>	+A <sub>K</sub>		
<b>Summa</b>					

## Kravgränser

Gräns för provbetyget

E: Minst 19 poäng.

D: Minst 34 poäng varav minst 10 poäng på lägst nivå C.

C: Minst 44 poäng varav minst 18 poäng på lägst nivå C.

B: Minst 55 poäng varav minst 6 poäng på nivå A.

A: Minst 62 poäng varav minst 10 poäng på nivå A.

Kommentarer:
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Blanketten finns att hämta på [www.prim-gruppen.se](http://www.prim-gruppen.se)