

Mathematics

Delprov B

1a

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 75 points.

Limit for test grade

- E: At least 19 points.
- D: At least 33 points of which at least 12 points at level C or higher.
- C: At least 41 points of which at least 18 points at level C or higher.
- B: At least 53 points of which at least 6 points at level A.
- A: At least 60 points of which at least 9 points at level A.

Name: _____

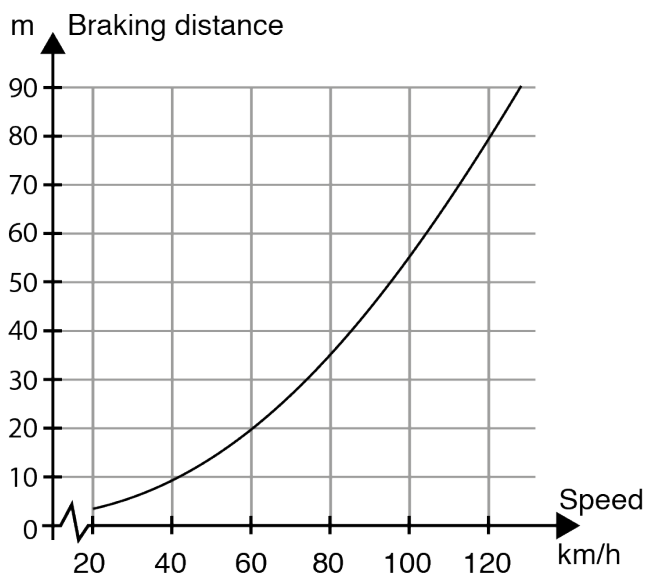
Date of birth: _____

Programme: _____ Class: _____

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

Answer: THB (1/0/0)

2. A car traveling at 60 km/h on a dry road has a braking distance of approximately 20 m. What is the car's speed when the braking distance is doubled?



Answer: _____ km/h (1/0/0)

3. Place the digits 1, 3, 4 and 9 in the boxes below, so that you end up with a value as close to 40 as possible.

.

(1/0/0)

4. How many minutes is 1.75 hours? Answer: _____ min (1/0/0)

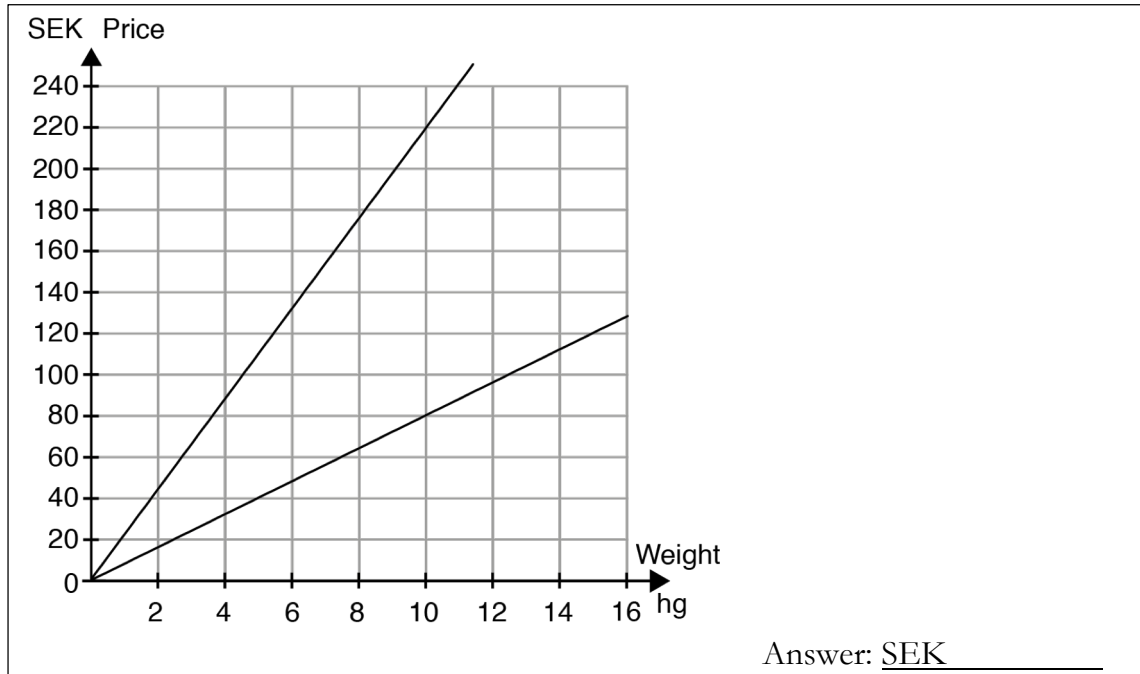
5. What is the probability to get a "one" twice in a row if you are rolling a six-sided die? Answer: _____ (1/0/0)

6. $\frac{2}{5}$ of a number is 6. What is the number? Show your solution.

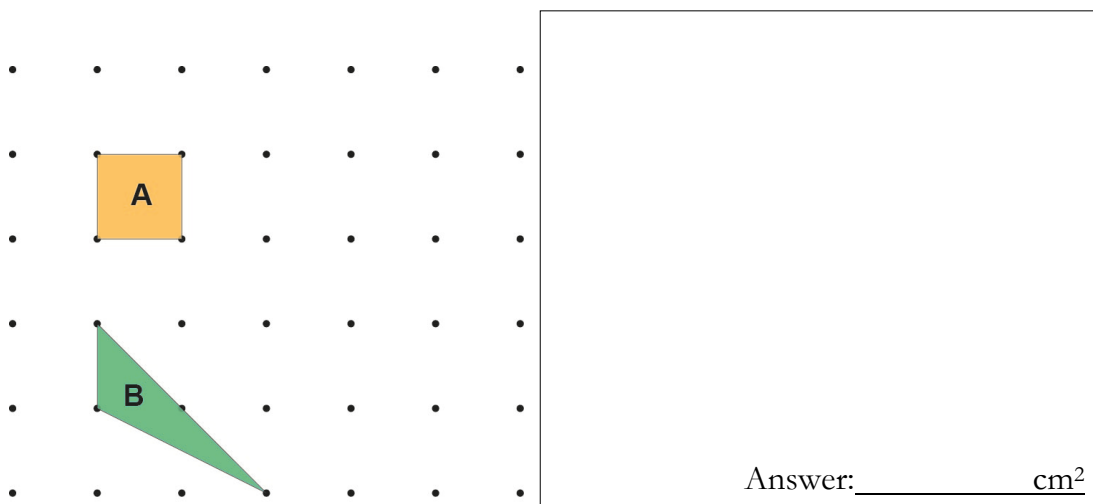
Answer: _____

(2/0/0)

7. The diagram shows how the price depends on weight, for two different kinds of coffee. How big is the difference in price per hectogram? Show your solution.



8. The area of Figure A is 1 cm^2 . Determine the area of Figure B. Show your solution.



9. What number is exactly half way between 10^2 and 10^3 ?

Answer: _____ (0/1/0)

10. What is the *approximate* value of $\sqrt{250}$? Circle your answer.

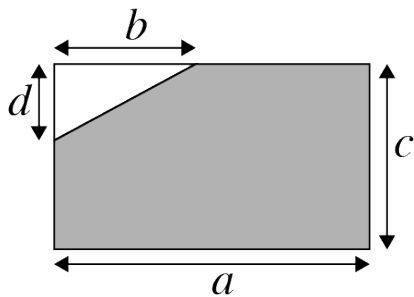
5 15 25 50 125 (0/1/0)

11. Determine the value of a

$$\frac{a}{7} = \frac{12}{42}$$

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

12. Write an expression for the shaded area.



Answer: _____ (0/1/0)

13. The table below shows a proportional relation between x and y .

| x | y |
|-----|-----|
| 1 | |
| 4 | 12 |
| | 30 |

a) Fill in the missing values in the table.

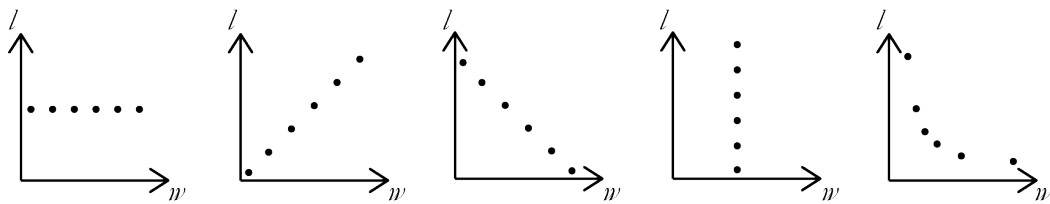
(0/1/0)

b) Describe the relation between x and y in words or with a formula.
Write your answer in the box.

Answer:

(0/1/0)

14. Berit is going to examine various possible values of length (l) and width (w) in a rectangle with an area of 12 cm^2 . She marks different values for length and width in a diagram. What should her diagram look like?
Circle your answer.



(0/0/1)

15. If $t = 6$ what is the value of the following expression?

$$\sqrt{\frac{25t^4}{9}}$$

Answer: _____

(0/0/1)

Test result – student summary

National test in mathematics 1a spring 2016

| | |
|-------|-------------|
| Name: | Test grade: |
|-------|-------------|

| | E-points | | C-points | | A-points | | Total | |
|---------------|------------|---------------|------------|---------------|------------|---------------|------------|---------------|
| | Your score | Maximum score | Your score | Maximum score | Your score | Maximum score | Your score | Maximum score |
| Part A | | 4 | | 5 | | 5 | | 14 |
| Part B | | 9 | | 8 | | 2 | | 19 |
| Part C | | 3 | | 4 | | 4 | | 11 |
| Part D | | 13 | | 13 | | 5 | | 31 |
| Total | | 29 | | 30 | | 16 | | 75 |

| Part A | E | C | A | Score | Comment |
|-----------------------------|-------------------------------------|------------------------------------|------------------------------------|-------|---------|
| Method and carrying through | +E _{PL} +E _M | +C _B +C _M | +A _B +A _M | | |
| Reasoning | +E _R +E _R | +C _R +C _R | +A _R +A _R | | |
| Communication | | +C _K | +A _K | | |
| Total | 4 | 5 | 5 | | |

| Part C | E | C | A | Score | Comment |
|-----------------------------|--------------------------------------|------------------------------------|-------------------------------------|-------|---------|
| Method and carrying through | +E _{PL} +E _{PL} | +C _P | +A _{PL} +A _P | | |
| Reasoning | +E _R | +C _R +C _R | +A _R | | |
| Communication | | +C _K | +A _K | | |
| Total | 3 | 4 | 4 | | |

Grading limits

Limit for test grade

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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.

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| Comments: |
|-----------|

The form is available to download at www.su.se/primgruppen