

SUBJECT TEST

Mathematics

GRADE

9

Tests which are re-used are protected by paragraph 3 of Chapter 4 of the Official Secrets Act.
The intention is for this test to be re-used until 2009-06-30.
This should be considered when determining the applicability of the Official Secrets Act.

Spring 2009

Part B1

Name

Part B1

This part consists of short questions to be solved without a calculator. A correct answer gives 1 g-point (1/0) or 1 vg-point (0/1).

Time: 80 minutes for Part B1 and Part B2 together. We recommend that you use 30 minutes at the most for working on 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 this question page.

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

Name: _____

School: _____ Class: _____

Birth date: Year _____ Month _____ Day _____

Female Male

1. Calculate $\frac{8000}{2000}$ Answer: _____ (1/0)

2. In the table you can see the temperatures in °C for the Nordic capital cities on a March day.

| City | Temp. |
|------------|-------|
| Helsinki | -8 |
| Copenhagen | 5 |
| Oslo | 0 |
| Reykjavik | 6 |
| Stockholm | -3 |

How many degrees is the temperature difference between the cities for which the difference is the greatest?

Answer: _____ °C (1/0)

3. Calculate $3.6 \cdot 0.5$ Answer: _____ (1/0)

4. How many minutes is 0.75 h? Answer: _____ min (1/0)

5. Which of the following numbers lies somewhere between $\frac{2}{3}$ and $\frac{4}{5}$? Circle your answer.

0.6 0.75 0.8 0.9 1.2 (1/0)

6. Show in some way how you calculate $91 - 19.8$ without a calculator.

Show here:

Answer: _____ (1/0)

7. Solve the equation $17 = 3x + 5$

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

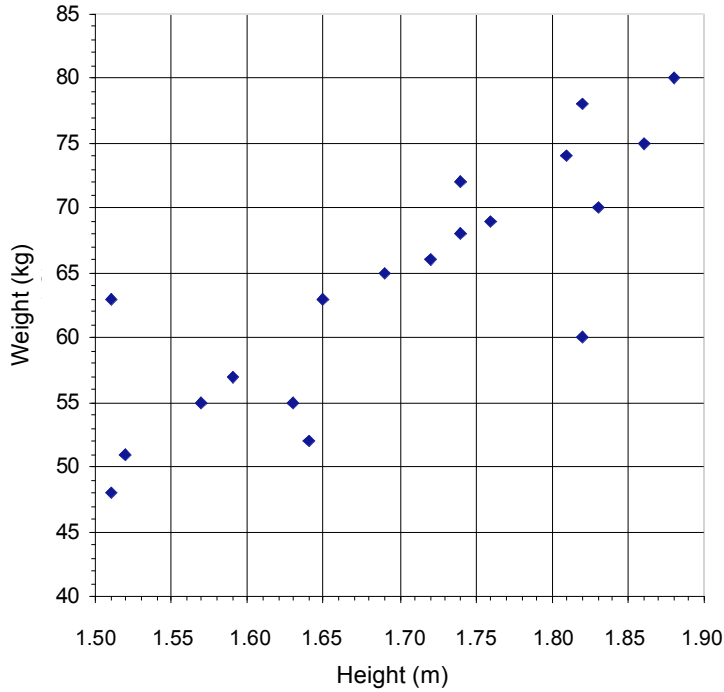
8. Which of the following calculations gives the greatest value? Circle your answer.

$\frac{5}{0.2}$ $\frac{5}{0.6}$ $\frac{0.2}{5}$ $5 \cdot 0.2$ $5 \cdot 0.6$ (1/0)

9. The probability of winning if you buy a lottery ticket is 0.4. How many winning tickets can you expect if you buy 30 lottery tickets?

Answer: _____ st (1/0)

10. Height and weight for class 9B



a) Philip goes in class 9B and weighs 65 kg.
How tall is he?

Answer: _____ m (1/0)

b) What is the median height for the class?

Answer: _____ m (0/1)

11. What value must x have for equality to hold?

$$75 \text{ million} = 7.5 \cdot 10^x$$

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

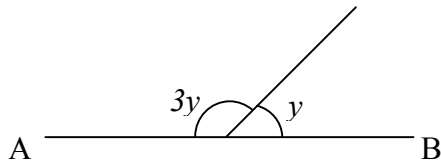
12. On an orienteering map in the scale 1:20 000 it is 5 cm between two checkpoints. How many kilometres is that in reality?

Answer: _____ km (0/1)

13. The perimeter of a square is $8a$. Write an expression for the area of the square.

Answer: _____ (0/1)

14. In the figure AB is a straight line. Find the angle y .



Answer: $y =$ _____ $^{\circ}$ (0/1)

15. How much is $4x + 6y$ if $2x + 3y = 12$?

Answer: _____ (0/1)

16. Merja runs 3 kilometres in 18 minutes. What is her average speed?

Answer: _____ km/h (0/1)

17. Calculate $\frac{102 + 102 + 102 + 102 + 102}{102 + 102}$

Answer: _____ (0/1)

