

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 **2017-06-30**.

This should be considered when determining the applicability of the Official Secrets Act.

Spring 2011

Part B1

Name

Instructions – 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 $14.8 - 9.75$ Answer: _____ (1/0)

2. How much is $\frac{2}{5}$ of 40 kr? Answer: _____ kr (1/0)

3. Write a number in the box so that equality holds. Answer: $8 \cdot \boxed{} = 10 - 6$ (1/0)

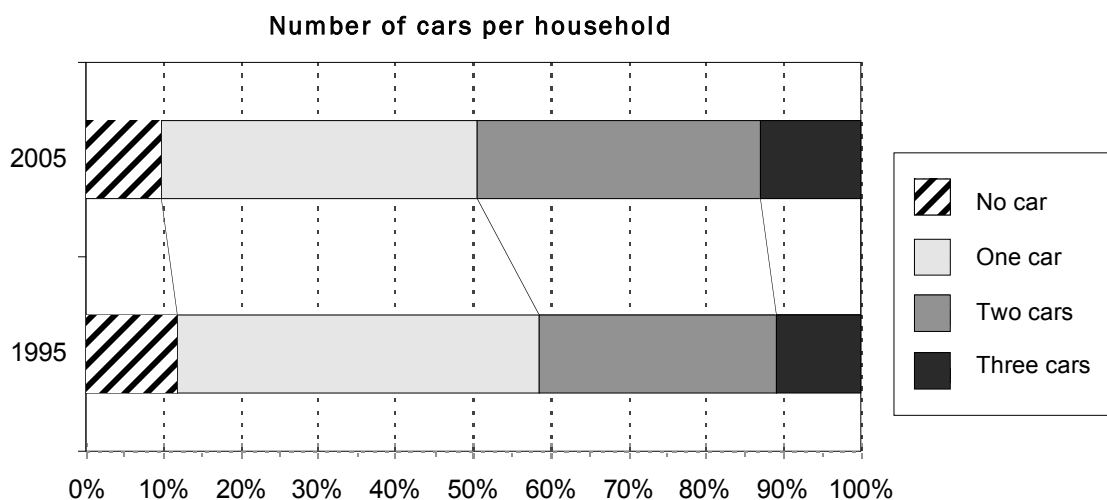
4. The candy in a shop costs 6.90 kr/hg. You are to calculate how much candy you can buy for 20 kr. Which of the following calculations would you choose? Circle your answer. (1/0)

$20 + 6.90$	$\frac{20}{6.90}$	$20 \cdot 6.90$
$20 - 6.90$	$\frac{6.90}{20}$	

5. Which of the following numbers is equal to $4 \cdot 10^3 + 2 \cdot 10 + 3 \cdot 1$? Circle your answer. (1/0)

63 423 4 023 40 023 4 000 203

6. The diagram shows how many cars there are per household in New Zealand at two different times.



About what percentage of the households had *two* cars in 1995?

Answer: _____% (1/0)

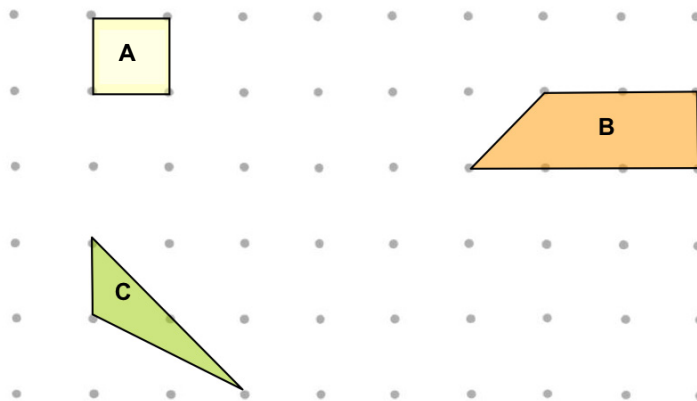
7. In Aneby the temperature is 1.5°C . What is the temperature in Beneby if it is 4.0°C colder there?

Answer: _____ $^{\circ}\text{C}$ (1/0)

8. State a number in *fractional form* that is greater than $\frac{3}{4}$ but less than 1.

Answer: _____

9.



The area of figure A is 1 cm^2 .
Find the area of figures B and C.

Answer: Area of B cm^2 (1/0)

Answer: Area of C cm^2 (0/1)

10. Make an estimate and circle the best alternative for the calculation $0.39 \cdot 0.84$.

(0/1)

0.033 0.12 0.33 1.2 3.3

11. In the diagram you can read off how far you have travelled in a given time at the speed 70 km/h.



Draw the corresponding graph for a speed of 90 km/h in this diagram.

(0/1)

12. On a map in the scale 1:500 000 it is 4 cm between two towns . How far is the actual distance? *Answer with a suitable unit.*

Answer: _____

(0/1)

13. State the number that is *halfway* between 100 and 1 000.

Answer: _____

(0/1)

14. What value does x have if $\sqrt{x+1} = 9$?

Answer: $x =$ _____

(0/1)

15. What value does x have if this equality holds?

$$2 \cdot 10^4 \cdot 5 \cdot 10^x = 10^9$$

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

16. When you turn off a freezer the temperature begins to rise. The following formula can be used to calculate the temperature (C) in Celsius degrees for a freezer that has been turned off for x hours: $C = 0.2x - 18$.

a) What was the temperature of the freezer right when it was turned off?

Answer: _____ °C (0/1)

b) How long will it take until the temperature is 0 degrees?

Answer: _____ h (0/1)

