



Jakarta International School

6th Grade

**Practice test 1- Formative
Rates, Ratios, Proportions.
Black**

Name: _____

Date: _____

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Clearly show all working- use extra paper if you wish. Each question is worth 3 points unless otherwise stated.

1) The speedometer on a car is calibrated to read faster than the actual speed. A speed of 55km/h shows 60km/h on the speedometer.

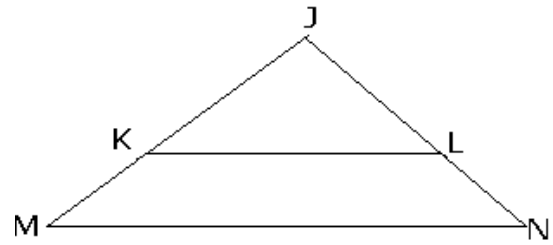
a. Calculate the actual speed if the speedometer shows 90km/h?

b. What speed shows on the speedometer if the car is travelling at 120km/h

2) Jack and Angie's savings are in the ratio 21:8. Angie's and Hazel's saving are in the ratio 4:9. If the 3 students have a total savings of \$94, how much more saving does Jack have than Hazel?

3) If p workers can do a job in n hours, how many hours does it take $p-r$ workers to do the same job?

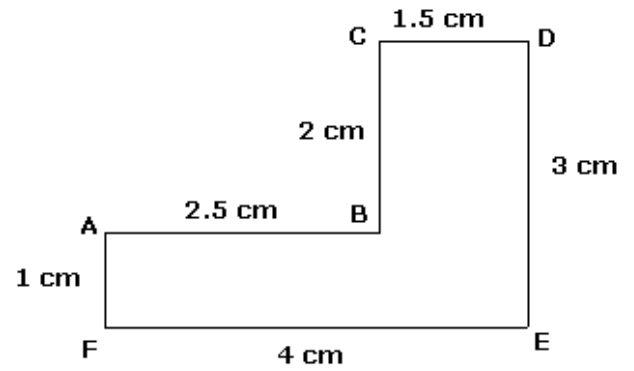
- 4) $\triangle JKL \sim \triangle JMN$
JN = 8cm; JL = 5 cm; KM = 2 cm. Find JK



- 5) The 177 students at Melville High School are grouped into 3 divisions, A, B & C. The ratio of the number of students in Division A to the number of students in Division B is 3:4. The ratio of the number of students in Division B to the number of students in Division C is 5:6. How many students in each division?

- 6) A water pipe discharges water at a rate of 15 litres per minute.
- How much water does it discharge in 15 minutes 20 seconds?
 - How long in minutes and seconds will the pipe take to fill a 250-litre tank?

- 7) The diagram shows the plan of a machine part with the scale 1:1.5
Find the actual area of the machine part.



- 8) The ratio of Peter's money to Mark's money was 7:10. After Peter bought 5 comic books at \$3.60, the ratio of Peter's money to Mark's money was 1:4.
How much money did Peter and Mark have left?

- 9) A long conference room table measuring 5 meters by 3 meters has a tablecloth spread over it. The tablecloth extends 1 meter beyond the table's surface on each side.
Is the tablecloth similar to the surface of the table? Explain.

10) It is known that the earth is now 4,600 million years old and human beings have lived on this planet for 30,000 years.

a. If earth's age is represented by 24 hours then represent the time that human beings have lived on this planet in hours. (3pts)

b. Convert your answer to seconds.(1pt)

11) The table shows the rates of personal income tax in a certain country.

Annual Income	Income tax
First \$7500	Not taxable
Next \$5000	2% per dollar above \$7500
Next \$10,000	3% per dollar above \$12,500
Next \$10,000	5% per dollar above \$22,500
Next \$50,000	10% per dollar above \$32,500

Mr. Smith's annual income for last year and this year were \$20000 and \$35000 respectively. How much more income tax did he pay this year than last year?

