

**YEAR 10 MATHS
TEST 4**

(1.) Simplify the following:

$$\frac{1\frac{1}{4} + \frac{7}{9}}{1\frac{4}{9} - 2\frac{2}{3} \times \frac{9}{64}}$$

(2.) Simplify the following:

$$2\frac{1}{2} \times 3\frac{1}{2} \div 4\frac{3}{8}$$

Use the following information to answer questions 3 and 4.

In a class 40 students, 22 offer Biology, 23 offer Economics, 20 offer Geography, 5 Biology and Economics only, 6 Biology only, 9 Economics only, 2 Economics and Geography only. If each student offered at least one of the subjects;

(3.) how many students offer all the three subjects?

(4.) how many students offer only two subjects?

Use the following information to answer questions 5 and 6.

In an election there were three candidates. $\frac{3}{7}$ of the electorates voted for the winner. The runner-up received $\frac{5}{8}$ of the remaining votes.

(5.) What fraction of the electorates voted for the third candidates?

(6.) If the winner received 3021 votes more than the runner-up, how many electorates voted?

- (7.) During one year in a school, $\frac{5}{8}$ of the students had measles, $\frac{1}{2}$ had chickenpox and $\frac{1}{8}$ had neither. What fraction of the school had both measles and chickenpox?
- (8.) A regular polygon has angles of size 150° each. How many sides has the polygon?
- (9.) A room contains 156.1m^3 of air. If the room is 8.31m long and 5.72m wide, calculate its height to 2 decimal places.
- (10.) In a right-angled triangle one of the acute angles is 20° greater than the other. Find the angles of the triangle.