

FORM 3 MATHEMATICS TUNE-UP EXAM 3<sup>rd</sup> TERM 2014

NAME-----ADM-----

INSTRUCTIONS;

- (i) Answer all the questions on the spaces provided below each question showing all the working.
- (ii) Read and understand the questions before answering

1 Evaluate

$$\frac{3.45 + 2.62}{786 \times 0.0007}$$

(3mks)

2 Work out

$$3 \frac{7}{8} + \sqrt{\frac{3 \frac{7}{8} \div 7 \frac{3}{4}}{5 \frac{1}{10} + 2 \frac{9}{10}}}$$

(3mks)

3 Two parallel chords of a circle 4cm and 6 cm long lie on the opposite side of the circle. If the radius of the circle is 5cm, determine the distance between the two chords. (3mks)

4 Solve by the use of common factors

(4mks)

$$\frac{x^2 - 9}{2x^2 + 3x - 9}$$

$$2x^2 + 3x - 9$$

5 Express as a single fraction

(4mks)

$$\frac{2y}{y+2} - \frac{3y+6}{y^2-4}$$

$$y+2 \quad y^2-4$$

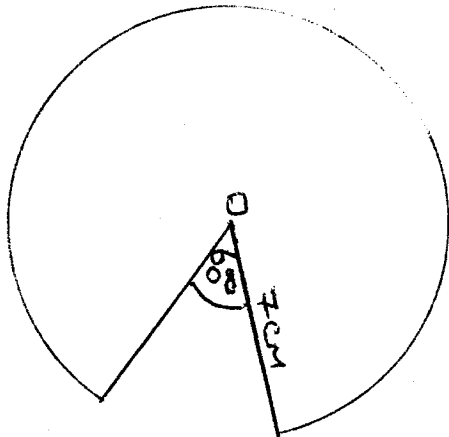
6 A basket is in the form of a frustum of a cone with base radius 5cm and the radius of the top being 6.5 cm. The vertical height is 7 cm.

(a) Find the volume of the basket

(4mks)

7 Find the perimeter of the following figure

(3mks)



8 Simplify by rationalizing the denominator.

(3mks)

$$\frac{\sqrt{2} + \sqrt{3}}{\sqrt{5} - \sqrt{2}}$$

$$\sqrt{5} - \sqrt{2}$$

9 Three men working 8 hours daily can complete a piece of work in 5 days. Find how long it will take 10 men working 6 hours a day to complete the same work.

(3mks)