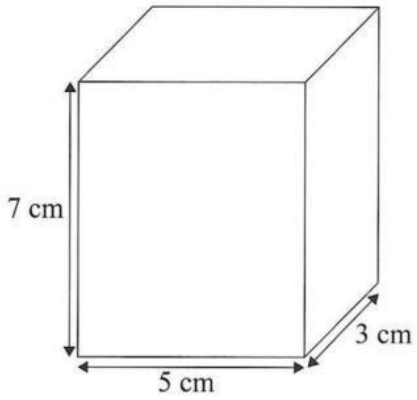
6.



NOT TO SCALE

The diagram shows a cuboid of length 5 cm, width 3 cm and height 7 cm. Each measurement is correct to the nearest cm.

Calculate

(a) the minimum possible volume of the cuboid, [2]

Minimum Length =

Minimum Width =

Minimum Height =

Minimum Volume =

(b) the maximum possible value of the total surface of the cuboid. [3]

Maximum Length =

Maximum Width =

Maximum Height =

Maximum Surface Area =

6. Every time Eddy shoots a free throw in a basketball game, the probability that he will score a point is 0.8.

When he shoots two free throws, calculate the probability that he

(a) scores both, [1]

(b) misses both, [2]

(c) scores one and misses one. [3]

6. (a) In the diagram, O is the centre of circle $ABCD$ and $\angle BCD = 107°$.

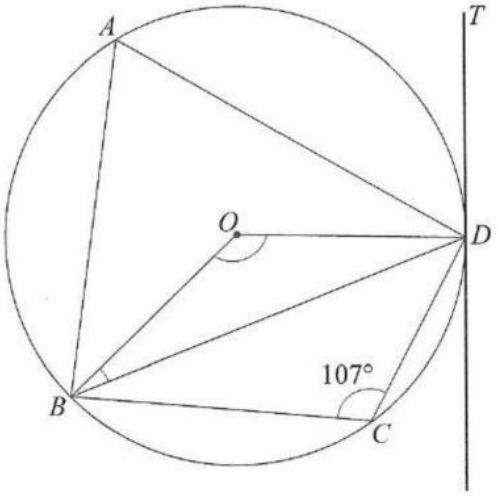
Calculate the value of

(i) $\angle BAD$, [1]

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(ii) $\angle BOD$, [1]

(iii) $\angle OBD$. [1]



(b) DT is the tangent to the circle at D

Write down the value of $\angle ODT$. Give reason for your answer. [2]

6. Simplify completely:

(a) $\frac{3m-7}{3} - \frac{2m-5}{2}$ [4]

Fractions After applying L.C.D.

_____ − _____

Simplified Fraction

_____

(b) $\frac{2x-6}{x^2-5x+6} \div \frac{1}{x-2}$ [4]

Fractions After applying Reciprocal

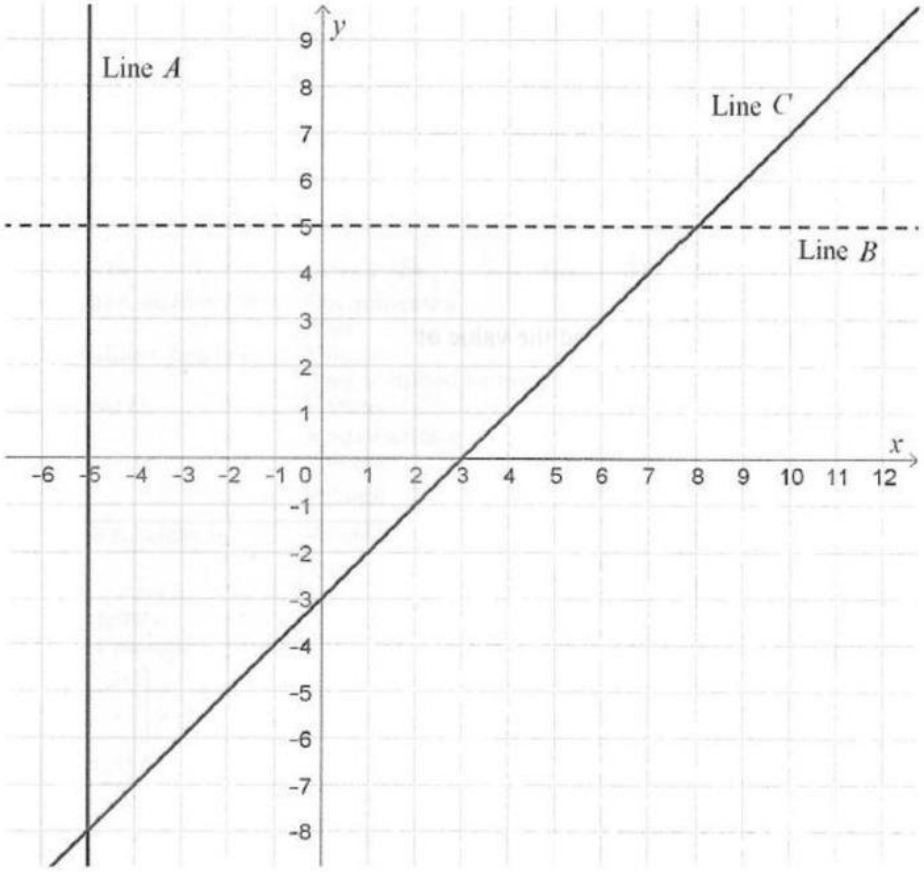
_____ × _____

( )( )

Simplified Value =

LIVEWORKSHEETS

6.



(a) From the diagram above, write an equation for

(i) Line A, [1]

(ii) Line B, [1]

(iii) Line C. [2]

(b) State the three inequalities that together describe the shaded region above. [3]

(i) Line A,

(ii) Line B,

(iii) Line C.

6. The equation of a curve is $y = x^2 - x - 6$.

Find the coordinates of the point where

(a) the curve intersects the y-axis, [3]

x intercepts = ( ) and ( )

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(b) $\frac{dy}{dx} = -7.$ [5]

First Derivative =

x =

y =

Coordinate = ( )

6. Simplify $\frac{4}{x-3} - \frac{2}{x+1}$ [4]

Fractions After applying L.C.D.

$$\frac{\qquad\qquad}{(\quad)(\quad)} - \frac{\qquad\qquad}{(\quad)(\quad)}$$

Simplified Fraction

$$\frac{\qquad\qquad}{(\quad)(\quad)}$$

LIVEWORKSHEETS