Mathematics: Units 2C and 2D
Formula sheet

Government of Western Australia
Curriculum Council

WACE
Western Australian Certificate of Education

Number and algebra: Estimation and calculation

For any number a and integers m and n,

$$a^m \times a^n = a^{m+n}$$

$$a^m \div a^n = a^{m-n}$$

Space and measurement: Measurement

Triangle: Area $= \dfrac{1}{2} \times$ base $\times$ height

Parallelogram: Area = base $\times$ height

Trapezium: Area $= \dfrac{1}{2}(a+b) \times$ height, where a and b are the lengths of the parallel sides

In a right triangle: $\sin\theta = \dfrac{\text{opposite}}{\text{hypotenuse}}$ $\cos\theta = \dfrac{\text{adjacent}}{\text{hypotenuse}}$ $\tan\theta = \dfrac{\text{opposite}}{\text{adjacent}}$

In any triangle ABC,

$$\dfrac{a}{\sin A} = \dfrac{b}{\sin B} = \dfrac{c}{\sin C}$$

$$\text{Area} = \dfrac{1}{2}ab\sin C$$

$$a^2 = b^2 + c^2 - 2bc\cos A$$

$$\cos A = \dfrac{b^2 + c^2 - a^2}{2bc}$$

Space and measurement: Coordinate geometry

Gradient of line, m, through the points (x_1, y_1) and (x_2, y_2) is given by $m = \dfrac{y_2 - y_1}{x_2 - x_1}$.

Distance, d, between the points (x_1, y_1) and (x_2, y_2) is given by $d = \sqrt{(y_2 - y_1)^2 + (x_2 - x_1)^2}$.

Lines are perpendicular if $m_1 \times m_2 = -1$

Chance and Data: Quantify chance

$$P(A) + P(\underline{A}) = 1$$

Note: Any additional formulas identified by the examination panel as necessary will be included in the body of the particular question.