## MATHEMATICAL FORMULAE

Compound interest

$$
\text { Total amount }=P\left(1+\frac{r}{100}\right)^{n}
$$

Mensuration

$$
\begin{aligned}
& \text { Curved surface area of a cone }=\pi r l \\
& \text { Surface area of a sphere }=4 \pi r^{2} \\
& \text { Volume of a cone }=\frac{1}{3} \pi r^{2} h \\
& \text { Volume of a sphere }=\frac{4}{3} \pi r^{3} \\
& \text { Area of triangle } A B C=\frac{1}{2} a b \sin C
\end{aligned}
$$

Arc length $=r \theta$, where $\theta$ is in radians

$$
\text { Sector area }=\frac{1}{2} r^{2} \theta, \text { where } \theta \text { is in radians }
$$

## Trigonometry

$$
\begin{gathered}
\frac{a}{\sin A}=\frac{b}{\sin B}=\frac{c}{\sin C} \\
a^{2}=b^{2}+c^{2}-2 b c \cos A
\end{gathered}
$$

Statistics

$$
\begin{aligned}
\text { Mean } & =\frac{\sum f x}{\sum f} \\
\text { Standard deviation } & =\sqrt{\frac{\sum f x^{2}}{\sum f}-\left(\frac{\sum f x}{\sum f}\right)^{2}}
\end{aligned}
$$

