

STA 4183 – The Theory of Interest

Formulas for More General Annuities

n conversion periods	k conversions per payment	n/k payments
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Annuities	Present value	Accumulated value	Perpetuities	Present value
Immediate	$\frac{a_{\overline{n} }}{s_{\overline{k} }}$	$\frac{s_{\overline{n} }}{s_{\overline{k} }}$	Immediate	$\frac{1}{is_{\overline{k} }}$
Due	$\frac{a_{\overline{n} }}{a_{\overline{k} }}$	$\frac{s_{\overline{n} }}{a_{\overline{k} }}$	Due	$\frac{1}{ia_{\overline{k} }}$

n conversion periods	m payments per conversion	mn payments
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Annuities	Present value	Accumulated value	Perpetuities	Present value
Immediate	$\frac{ia_{\overline{n} }}{i^{(m)}}$	$\frac{is_{\overline{n} }}{i^{(m)}}$	Immediate	$\frac{1}{i^{(m)}}$
Due	$\frac{ia_{\overline{n} }}{d^{(m)}}$	$\frac{is_{\overline{n} }}{d^{(m)}}$	Due	$\frac{1}{d^{(m)}}$