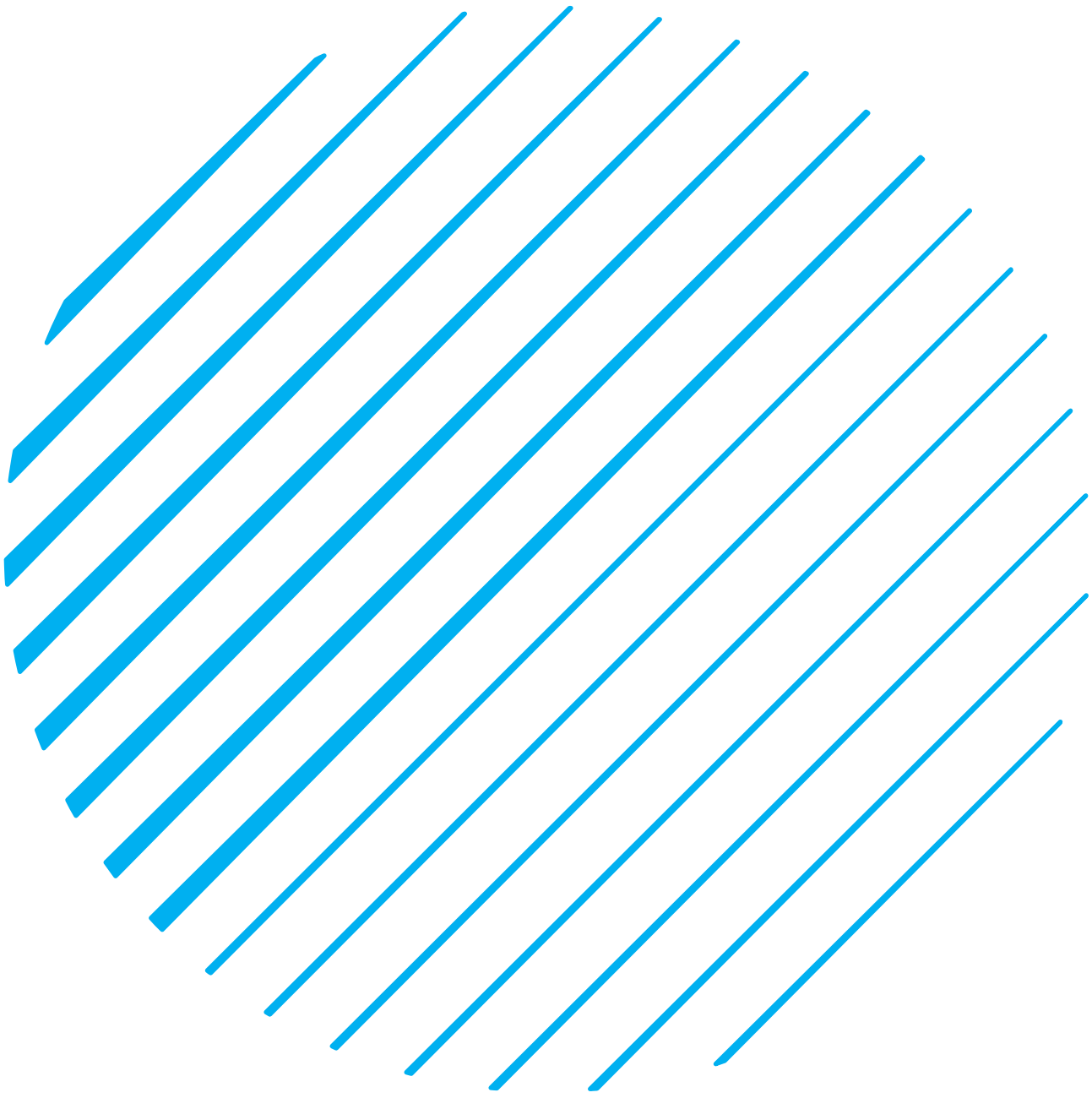
VITAL MATHEMATICS



ALGEBRA

COMPOUND INTEREST

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INTRODUCTION

Compound interest is a method of calculating the increase of an initial value at a constant rate over multiple period of time in any interval. This method could be used for things like investments that have a constant interest over a period of time.

SIMPLE INTEREST EQUATION

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

$A - Final\ Amount$
$P - Principal\ (Initial\ Anount)$
$r - Rate\ of\ Interest$
$t - time\ interval\ (In\ years)$
$n - Number\ of\ times\ therate\ is\ applied\ in\ time\ interval$

SOLVING SIMPLE INTEREST

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

STEP 1) Identify the Principal, rate, time and n before doing any calculations.

STEP 2) Convert the rate to a percentage.

$$Example: Rate = 4\% = .04$$
$$Example: Rate = 40\% = .40$$

STEP 3) Divide the rate percentage by n

STEP 4) Add one to the value in STEP 3

STEP 5) Compute following operation:

$$(step\ 4)^{nt}$$

STEP 6) Multiply STEP 5 by P

STEP 7) Provide conclusion

COMPOUND INTEREST EXAMPLE

Example 1: If P = 5600, r = 68%, n = 52 and t is 3 years. What is A?

Example 2) Stevie invested $2000 at a rate of 3% compounded quarterly for 5 years. How much will Stevie have after 5 years?

COMPOUND INTEREST

VITAL MATHEMATICS BY STEVIE CARPENTER

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