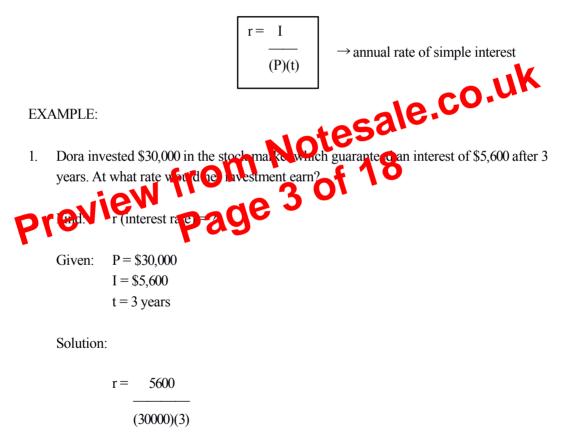
Solution:

$$P = I$$
(r)(t)
$$P = 11.25$$
(0.05)(9/12)
$$P = 11.25$$
0.0375

Answer: P = \$300

• Interest Rate (r) - the ratio of the interest in one unit of time.



r = 0.0622

Answer: r = 6.22%

\rightarrow INTEREST BETWEEN DATES:

* 4 VARIETIES OF INTEREST:

- 1. Ordinary Interest for Actual
- 2. Ordinary Interest for Approximate
- 3. Exact Interest for Actual
- 4. Exact Interest for Approximate

EXAMPLE:

1. Find the interest using the 4 methods on \$50,000 at 5% from April 21, 2018 to October 24, 2018

Find: D (actual and approx. time) = ?Io (for actual) = ?Io (for approx) = ?Ie (for actual) = ?Ie (for approx) = ?

Given:
$$P = $50,000$$

 $r = 5\% (5 / 100) = 0.05$

1 - 5% (5 / 100) - 0.05		
Solution:		AROYIMATE # OF DAYS
MONTH	ACTUAL # OF DAYS	PROXIMATE # OF DAYS
April \rightarrow from 21st to end of month	NOL	9
May \rightarrow full month	31	30
June \rightarrow full month	20	30
July \rightarrow full month \bigcirc		30
August Pal North	31	30
September \rightarrow full month	30	30
October \rightarrow from 1st to 24th	24	24
	186 days	183 days

1. Ordinary Interest for Actual

> Io = Pr (D / 360) $I_0 = (50000)(0.05)(186/360)$ Io = 1291.67

3. Exact Interest for Actual

> Ie = Pr (D / 365)Ie = (50000)(0.05)(186/365)Ie = 1273.97

Answer: Io (for actual) = 1291.67Io (for approx) = 1270.83Ie (for actual) = 1273.97Ie (for approx) = 1253.42 2. Ordinary Interest for Approximate

> Io = Pr (D / 360) $I_0 = (50000)(0.05)(183/360)$ Io = 1270.83

Exact Interest for Approximate 4.

> Ie = Pr (D / 365)Ie = (50000)(0.05)(183/365)Ie = 1253.42

EXAMPLES:

1. Hyzel borrowed \$230,000 at 834% bank discount rate for 1 year and 9 months. Find the amount received on the date of the borrowing and the amount payable on the maturity date.

Find: P (Proceeds/Present Value) = ?
F (Maturity value) = ?
Given: money borrowed = \$230,000

$$d = 83\%(3/4 - 0.75)$$

 $d = 8.75\%(8.75/100) = 0.0875$
t = 1 year and 9 months (9/12 = 0.75)
t = 1.75
Solution:
a. Solve for d:
 $d = 834\%(3/4 = 0.75)$
 $d = 8.75\%(8.75/100) = 0.0875$
b. Solve for t:
t = 1 year and 9 months (9/12 = 0.75)
t = 1.75
c. Amount received on the date of the borrow for exceeds/present value):
P = F11 (10)
P = F11 (10)
P = 5194,781.25
1 - (d)(t)
F = 194,781.25
 $1 - (0.0875)(1.75)$
F = 194,781.25
 $F = 194,781.25$
 $F = 5230,000$

Swer: $P = \frac{194}{194}$, 101.2 $F = \frac{230,000}{100}$