Name	•
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## **APR; Annual Percentage Rate**

## **Numeric Response**

1. When given the number of monthly payments and a table for finance charges for \$100 on an installment loan, the annual percentage rate, APR, can be calculated using the following formula:

$Finance\_Ch \arg e\_per\_\$100 = \$100 =$	$\int Finance_Ch \arg e$
$T mance_Cn arge_per_$100 = $100$	Amount_Financed

	Finan	ce Charge pe	r \$100	
Term in		Annual Perc	centage Rate	
Months	7%	7.8%	8.6%	9.1%
30	\$9.30	\$10.39	\$11.49	\$12.18
36	11.16	12.48	13.81	14.65
42	13.04	14.59	16.16	17.14
48	14.94	16.73	18.54	19.68
54	16.86	18.90	20.95	22.24
60	18.81	21.08	23.39	24.84
66	20.77	23.30	25.86	27.47
72	22.75	25.54	28.36	30.14

Steve Johnson obtained a loan from Swifty-Loan for \$10,977.86 to buy a boat. Steve has chosen to pay back the loan in 36 payments. If the finance charge will be \$1,608.26, how much is the APR for his loan?

Tinunce_C	naige_per_	¢100 — \$100 ×	Amount_F	inanced
	Finan	ce Charge per	r \$100	
Term in		Annual Perc	entage Rate	
Months	6.8%	7.5%	8.3%	8.9%
18	\$5.47	\$6.04	\$6.70	\$7.19
24	7.24	8.00	8.87	9.53
30	9.02	9.98	11.08	11.91
36	10.83	11.98	13.31	14.31
42	12.65	14.01	15.57	16.75
48	14.50	16.06	17.86	19.22

18.13

20.23

 $Finance\_Ch \arg e\_per\_\$100 = \$100 \times \frac{Finance\_Ch \arg e}{Amount\_Financed}$ 

Juan Johnson obtained a loan from Swifty-Loan for \$9,901.46 to buy a boat. Juan has chosen to pay back the loan in 18 payments. If the finance charge will be \$711.91, how much is the APR for his loan?

20.18

22.52

21.72

24.26

54

60

16.36

18.24

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	Financ	ce Charge pe	r \$100	
Term in		Annual Perc	centage Rate	
Months	9.7%	10.6%	11.3%	12.3%
18	\$7.85	\$8.60	\$9.18	\$10.02
24	10.42	11.41	12.19	13.31
30	13.02	14.27	15.26	16.67
36	15.66	17.18	18.37	20.09
42	18.33	20.13	21.54	23.57
48	21.05	23.13	24.76	27.11
54	23.81	26.17	28.03	30.71
60	26.60	29.26	31.35	34.38

 $Finance\_Ch \arg e\_per\_\$100 = \$100 \times \frac{Finance\_Ch \arg e}{Amount\_Financed}$ 

Juan Escalante obtained a loan from Spiffy-Loan for \$4,360.81 to buy a van. Juan has chosen to pay back the loan in 54 payments. If the finance charge will be \$1,339.20, how much is the APR for his loan?

	Finan	ce Charge pe	r \$100	
Term in		Annual Perc	centage Rate	
Months	9.1%	10%	10.5%	11.3%
24	\$9.75	\$10.75	\$11.30	\$12.19
30	12.18	13.43	14.13	15.26
36	14.65	16.16	17.01	18.37
42	17.14	18.93	19.93	21.54
48	19.68	21.74	22.90	24.76
54	22.24	24.59	25.91	28.03
60	24.84	27.48	28.96	31.35
66	27.47	30.41	32.06	34.73

 $Finance\_Ch \arg e\_per\_\$100 = \$100 \times \frac{Finance\_Ch \arg e}{Amount\_Financed}$ 

Deavin Escalante obtained a loan from Thrifty-Loan for \$9,666.06 to buy a car. Deavin has chosen to pay back the loan in 66 payments. If the finance charge will be \$2,939.45, how much is the APR for his loan?

T munce_C	naige_per_c	\$100 — \$100 ×	Amount_F	inanced
	Financ	ce Charge pe	r \$100	
Term in		Annual Perc	centage Rate	
Months	8.3%	8.8%	9.8%	10.5%
18	\$6.70	\$7.11	\$7.94	\$8.52
24	8.87	9.42	10.53	11.30
30	11.08	11.77	13.16	14.13
36	13.31	14.14	15.82	17.01
42	15.57	16.55	18.53	19.93

18.99

21.46

23.97

17.86

20.18

22.52

48

54

60

 $Finance\_Ch \arg e\_per\_\$100 = \$100 \times \frac{Finance\_Ch \arg e}{2}$ 

Veronica Galentino obtained a student loan from Jiffy-Loan for \$11,293.39. Veronica has chosen to pay back the loan in 60 payments. If the finance charge will be \$2,707.03, how much is the APR for her loan?

21.28

24.07

26.89

22.90

25.91

28.96

			_	
	Finan	ce Charge pe	r \$100	
Term in		Annual Pere	centage Rate	
Months	7.5%	8%	8.9%	9.7%
30	\$9.98	\$10.66	\$11.91	\$13.02
36	11.98	12.81	14.31	15.66
42	14.01	14.98	16.75	18.33
48	16.06	17.18	19.22	21.05
54	18.13	19.41	21.72	23.81
60	20.23	21.66	24.26	26.60
66	22.35	23.94	26.83	29.43
72	24.49	26.24	29.43	32.30

Einance Charge per $$100 - $1$	$Finance_Charge$
$Finance\_Ch \arg e\_per\_\$100 = \$1$	$\frac{100 \times 100}{Amount_Financed}$

Veronica Escalante obtained a student loan from Jiffy-Loan for \$3,041.80. Veronica has chosen to pay back the loan in 54 payments. If the finance charge will be \$660.68, how much is the APR for her loan?

			Ilmouni_1	maneca
	Financ	ce Charge pe	er \$100	
Term in			centage Rate	
Months	8.5%	9.2%	9.7%	10.4%
12	\$4.66	\$5.05	\$5.33	\$5.72
18	6.86	7.44	7.85	8.43
24	9.09	9.86	10.42	11.19
30	11.35	12.32	13.02	13.99
36	13.64	14.81	15.66	16.84
42	15.96	17.34	18.33	19.73
48	18.31	19.90	21.05	22.66
54	20.69	22.50	23.81	25.64

 $Finance\_Ch \arg e\_per\_\$100 = \$100 \times \frac{Finance\_Ch \arg e}{Amount\_Financed}$ 

Deavin Escalante obtained a student loan from Swifty-Loan for \$8,813.45. Deavin has chosen to pay back the loan in 42 payments. If the finance charge will be \$1,615.51, how much is the APR for his loan?

			1111011111_1	
	Finan	ce Charge pe	r \$100	
Term in		Annual Pere	centage Rate	
Months	5.1%	5.8%	6.3%	7.1%
18	\$4.09	\$4.65	\$5.06	\$5.71
24	5.40	6.15	6.69	7.56
30	6.72	7.67	8.34	9.43
36	8.06	9.19	10.01	11.32
42	9.40	10.73	11.69	13.23
48	10.76	12.29	13.39	15.16
54	12.12	13.86	15.10	17.12
60	13.50	15.44	16.84	19.09

 $Finance\_Ch \arg e\_per\_\$100 = \$100 \times \frac{Finance\_Ch \arg e}{Amount\_Financed}$ 

Juan Christian obtained a student loan from Swifty-Loan for \$9,598.29. Juan has chosen to pay back the loan in 30 payments. If the finance charge will be \$645.01, how much is the APR for his loan?

## **APR; Annual Percentage Rate Answer Section**

## NUMERIC RESPONSE

- 1. ANS: 9.1
  - PTS: 1
- 2. ANS: 8.9
  - PTS: 1
- 3. ANS: 12.3
  - PTS: 1
- 4. ANS: 10
  - PTS: 1
- 5. ANS: 8.8
  - PTS: 1
- 6. ANS: 8.9
  - PTS: 1
- 7. ANS: 9.7
  - PTS: 1
- 8. ANS: 5.1
  - PTS: 1