

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Find the missing value.

Principal	Rate	Time	Simple Interest
\$7,800		6.5 years	\$9,886.50

A) 18.5% B) 19% C) 19.5% D) 20%

2. Find the future value of the loan.

$P = \$7,600$ ,  $r = 9\%$ ,  $t = 5$  years

A) \$11,693.54 B) \$10,524.19 C) \$11,020.00 D) \$9,918.00

3. Find the maturity value.

Principal	Rate	Compounded	Time
\$2,750	15%	Semiannually	5.5 years

A) \$6,193.04 B) \$6,143.42 C) \$6,072.67 D) \$6,092.92

4. Kelly purchased a toaster for \$150. She made a down payment of 25% and financed the rest for 3 months with payments of \$55.67. Find (a) the down payment and (b) the total installment price of the toaster.

A) \$33.75, \$204.50 B) \$37.50, \$184.05 C) \$41.25, \$224.95 D) \$37.50, \$204.50

5. Samir purchased a car for \$40,000. He made a down payment of \$30,000 and paid \$315.67 monthly for 3 years. Find the APR from the table below.

	Annual Percentage Rate					
	6.0%	6.5%	7.0%	7.5%	8.0%	8.5%
<b>Number of Payments</b>						
36	\$9.52	\$10.34	\$11.16	\$11.98	\$12.81	\$13.64
<b>(Finance charge per \$100 of amount financed)</b>						

	Annual Percentage Rate						
	9.0%	9.5%	10.0%	10.5%	11.0%	11.5%	12.0%
<b>Number of Payments</b>							
36	\$14.48	\$15.32	\$16.16	\$17.01	\$17.86	\$18.71	\$19.57
<b>(Finance charge per \$100 of amount financed)</b>							

A) 7.0% B) 7.5% C) 8.0% D) 8.5%

6. A \$1,850 loan is to be paid off in 24 monthly payments of \$88.57. The borrower decides to pay off the loan after 2 payments. Use the rule of 78s to find the amount of interest saved.

A) \$231.95 B) \$231.46 C) \$237.66 D) \$232.49

7. A house sells for \$289,000 and a 25% down payment is made. A 15-year mortgage at 7.5% was obtained. Find the monthly payment and the total interest paid.

Monthly Payment per \$1000 of Mortgage (Includes Principal and Interest)		
Rate (%)	Number of years	
	15	30
6.5	\$8.71	\$6.32
7	\$8.99	\$6.65
7.5	\$9.28	\$6.99
8	\$9.56	\$7.34

- A) Monthly payment = \$2,111.43; total interest paid = \$163,307.40  
 B) Monthly payment = \$2,011.44; total interest paid = \$145,309.20  
 C) Monthly payment = \$2,020.55; total interest paid = \$146,949.00  
 D) Monthly payment = \$2,003.29; total interest paid = \$143,842.20
8. In a classroom, the students are 15 boys and 3 girls. If one student is selected at random, find the probability that the student is a girl.  
 A)  $\frac{1}{3}$  B)  $\frac{1}{5}$  C)  $\frac{5}{6}$  D)  $\frac{1}{6}$
9. A single card is drawn from an ordinary 52-card deck. Find the probability of getting a spade or a jack.  
 A)  $\frac{1}{26}$  B)  $\frac{1}{52}$  C)  $\frac{1}{13}$  D)  $\frac{4}{13}$
10. A single card is drawn from an ordinary 52-card deck. Find the probability of getting a club and a 7.  
 A)  $\frac{1}{26}$  B)  $\frac{1}{52}$  C)  $\frac{1}{13}$  D)  $\frac{4}{13}$
11. When a single card is drawn from a shuffled deck of cards, find the odds in favor of getting a 7.  
 A) 1:51 B) 51:1 C) 1:12 D) 12:1
12. If the odds against a horse winning a race are 7:3, what is the probability that the horse will win the race?  
 A)  $\frac{4}{7}$  B)  $\frac{3}{7}$  C)  $\frac{7}{10}$  D)  $\frac{3}{10}$
13. A box contains nine \$1 bills, five \$5 bills, eight \$10 bills, and eight \$20 bills. What is the expectation if one bill is selected?  
 A) \$10.13 B) \$9.13 C) \$11.13 D) \$8.13

14. Three cable channels (95, 97, and 103) air quiz shows, comedies, and dramas. The numbers of shows aired are shown here.

Type of show	Channel 95	Channel 97	Channel 103
Quiz show	3	3	1
Comedy	6	1	3
Drama	4	8	5

If a show is selected at random, what is the probability that the show is on Channel 103 or it is a comedy?

- A)  $\frac{8}{17}$  B)  $\frac{19}{34}$  C)  $\frac{19}{30}$  D)  $\frac{9}{17}$

15. A card is drawn from a deck and then replaced. Then, a second card is drawn. Find the probability of getting an ace both times.

- A)  $\frac{2}{13}$  B)  $\frac{1}{221}$  C)  $\frac{1}{169}$  D)  $\frac{7}{52}$

16. Evaluate the expression.

$$\frac{12!}{2!6!}$$

- A) 1 B) 720 C) 11,880 D) 332,640

17. How many different three letter permutations can be formed from the letters in the word *clipboard*?

- A) 504 B) 729 C) 544,320 D) 336

18. How many 3-digit codes using the digits 0 through 9 are possible if repetitions are allowed?

- A) 30 B) 1000 C) 729 D) 504

19. How many ways can a person select four books, two CDs, and one DVD from ten books, twenty CDs, and five DVDs?

- A) 6,724,520 B) 199,500 C) 405 D) 8,000

20. Find the probability of randomly selecting three science books and four history books from a box containing five science books and six history books.

- A)  $\frac{7}{11}$  B)  $\frac{5}{11}$  C)  $\frac{2}{5}$  D)  $\frac{1}{5}$



27. Use a scatter plot to determine the relationship between the  $x$  values and the  $y$  values.

$x$	7	2	4	5	1	6	3
$y$	6	32	24	18	37	14	30

- A) Positive linear relationship  
 B) Negative linear relationship  
 C) Nonlinear relationship  
 D) No relationship

28. Find the value for the correlation coefficient  $r$ .

$x$	5	1	4	2	3
$y$	11	12	6	3	10

- A)  $-0.013$    B)  $-0.067$    C)  $0.063$    D)  $0.042$

29. Twenty-five people responded to a questionnaire about what types of pets they had. Construct a frequency distribution for the data (D = dogs only, C = cats only, B = both, N = neither).

D	B	D	N	D
B	N	N	N	C
C	D	D	N	C
N	D	N	B	B
D	B	N	C	D

30. The ages of 40 community college students were gathered. Construct a frequency distribution for the data using five classes.

28	36	42	41	21	31	39	32
24	35	19	33	19	46	20	33
31	38	20	19	22	33	36	25
41	24	25	37	35	24	41	34
31	34	42	22	19	27	32	23

31. The grades on a college math exam are shown below. Construct a stem and leaf plot for the data.

79	77	51	81	71	68
51	70	71	83	79	99
84	85	92	73	95	76
91	80	76	99	85	81
75	68	78	54	73	54

32. Fifty people participated in a poll to determine their favorite ice cream flavor. Use the data to construct a bar graph.

<u>Flavor</u>	<u>Number</u>
Chocolate	15
Strawberry	8
Vanilla	13
Other	14

33. Fifty people participated in a poll to determine their favorite ice cream flavor. Use the data to construct a pie chart.

<u>Flavor</u>	<u>Number</u>
Chocolate	15
Strawberry	8
Vanilla	13
Other	14

34. The exam grades of 31 students were used to obtain the frequency distribution below. Construct a histogram for the data.

<u>Class</u>	<u>Frequency</u>
40-49	1
50-59	2
60-69	5
70-79	12
80-89	7
90-99	4