

MasterMath

8th Grade 4th Quarter Exam

Name _____
Date _____

Closed Book: 60 minutes to complete
CUCC: You may use a calculator.

1. There is approximately 326,000,000,000,000,000,000 gallons of water on the earth. Please write this number in Scientific Notation.

3.26×10^{20}

2. The surface atmospheric pressure on the moon during the day is 9.999^{-8} Pascals. What is this number in standard form?

.00000009999

3. What is the product of these numbers:

1.2×10^4	x	2.3×10^5
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Scientific Notation	Standard Form
2.76×10^9	2,760,000,000

4. You want to buy a car in a year, and have budgeted \$4000 for the purchase. Bobby's Bank has a promotional Savings Account that pays interest of 6% compounded annually. How much would you need to put in the account today in order to have \$4,000 to buy the car in a year?

\$3,773.58

5. You have \$3000 to invest in a savings account, and have found two bank offers that seem attractive. Bobby's Bank offers Simple Interest of 5%. Betty's Bank offers interest of 5%, compounded annually. Fill in this table to help decide which offer makes more sense to you.

	Balance after 1 year	Balance after 2 years	Balance after 3 years	Balance after 4 years	Balance after 3 years
Bobby's Bank	\$3,150.00	\$3,300.00	\$3,450.00	\$3,600.00	\$3,750.00
Betty's Bank	\$3,150.00	\$3,307.50	\$3,472.88	\$3,646.52	\$3,828.84

6. Your parents agree to lend you the money to purchase a phone that costs \$495. You agree to pay them back, with annual interest of 5%, on your birthday in 6 months. Your grandmother always gives you \$500 on your birthday. You don't know if the \$500 will be enough to pay back your parents. How much will you owe your parents in 6 months?

\$507.38

7. You deposit \$2,500.00 into an account earning 6% interest compounded annually. What is your balance after 5 years? How much interest did you earn?

Balance	Interest Earned
\$3,345.56	\$845.56

8. Your savings account earns 6% interest compounded annually. You opened the account 6 years ago, and haven't made any deposits or withdrawals since then. The account balance is now \$709.26. What was your original deposit?

\$530.00

9. Your home mortgage is for \$265,000. The mortgage is for 30 years at 4.5% interest, and payments of \$1,337.70 per month. How much interest would you pay the bank during the 2nd month of the loan? How much interest would you pay over the term of the loan?

Month	Balance Before Payment	Monthly Interest	Balance After Payment
1	265000	$265000 * .00375 = 993.75$	$265000 - 1337.70 + 993.75 = 264656.05$
2	264656.05	$264656.05 * .00375 = 992.46$	$264656.05 - 1337.70 + 992.46 = 264310.81$

2nd month interest	\$992.46
total term interest	\$216,572

10. In which case would you pay more interest: 1) a 30 year mortgage of \$100,000 at 3.5% with payments of \$447.74 per month; or 2) a 25 year mortgage of \$100,000 at 4% interest with monthly payments of \$526.08?

The 30 year mortgage cost more in interest.

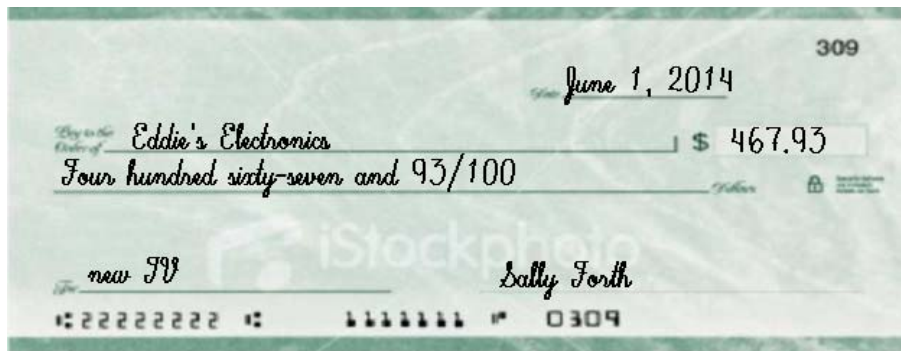
11. Complete the table for a 5 year installment loan of \$5000 at 12% interest?:

Month	Payment	Balance Before	Monthly Interest	Balance After
1	\$110.12	\$5,000.00	\$50.00	\$4,939.88
2	\$110.12	\$4,939.88	\$49.40	\$4,879.16
2	\$110.12	\$4,879.16	\$48.79	\$4,817.83

12. You open a checking account with a deposit of \$1,200.00. Your first check, #1001, dated Jan 2, 2013, is to Bob's Beds for \$425.00. Your next check, on Jan 5, is for \$582.35 you owe on your credit card. Your next check on Jan 15 is to Betty's Beauty Supply for \$63.86. Your next check on Jan 23 is to the landlord, World Realty, for \$600.00. You want to use the Debit Card on Jan 23rd, to take 100.00 out of your checking account. Please fill in the check registry and determine what your Balance is.

Check Number	Date	Description of Transaction	Payment/ Debit (-)	Fee	Deposit/ Credit (+)	Balance
						1,200.00
1001	1/2/13	Bob's Beds	425.00			775.00
1002	1/5	Credit Card Company	582.35			192.65
1003	1/15	Betty's Beauty Supply	63.86			128.79
1004	1/23	World Realty	600.00			-471.21

13. You pay for a new TV with a check to Eddie's Electronics for \$467.93. Please fill in the check below to pay Eddie.



14. What is the check's Routing Number?

22222222

15. If a merchant has \$685.15 in credit card sales, and pays a transaction fee of 2.75% to the credit card company, his net receipts for the credit card sales will be what?

\$666.30

16. The most important factor used to determine your credit score is:

payment history

17. Based upon this credit card statement, what was your interest expense for the month?

\$71.72

Statement of Personal Credit Card Account			
Retain this portion for your files.			
Cardmember Name	Account Number	Statement Closing Date	
JOE EMPLOYEE	1234-456-890	01-31-01	
Statement Date:		Payment Due Date:	
Closing Date:		Annual Percentage Rate:	18%
Average Daily Balance:	\$398.45	Credit Available:	
New Balance:		Minimum Payment Due:	
Account Summary			
Previous Balance:	\$465.15	Transaction Fees:	
Purchases:	\$378.12	Annual Fees:	
Cash Advances:		Current Amount Due:	
Payments:	\$425.00	Amount Past Due:	
Finance Charge:		Amount Over Credit Line:	
Late Charge:		NEW BALANCE:	

18. You have a great credit rating, and the Annual Percentage Rate (APR) that you pay on your credit card is 9.9%. Your friend Joe has a bad credit history, and the APR on his credit card is 24.9% If both of you have Average Daily Balances of exactly \$2,500 for the month, how much less will you pay in interest expense than Joe will pay?

\$31.25

19. The range of credit scores, from lowest to highest, is:

300 - 850