HOMEWORK QUIZ 2

Course name: MATH 101 Algebra Section 02, Spring 2006
Professor name: Clarence Wilson
College name: University of Detroit-Mercy
Course code:
Section code:

Directions:

Question: 1   QID: 8567

Solve for m:

$$E = mc^2$$

(A) Ec^2
(B) $E - c^2$
(C) $\dfrac{E}{c^2}$
(D) $2Ec$
(E) None of the above

Question: 2   QID: 8634

Eddie spills his cash register drawer on the floor and has to sweep up the coins. He has 742 coins which are a mixture of pennies, nickels, dimes, and quarters. There are 10 times as many pennies as dimes, and half as many quarters as dimes. If he has $24.60 how many dimes are there?

(A) 25
(B) 40
(C) 50
(D) 500

Question: 3   QID: 8636

Bobby has a bag containing 2 sizes of marbles. The big ones weigh 8 g and the small ones weigh 2 g. If there are twice as many small ones as big ones and the bag weighs 324 g, how many big marbles does he have?

(A) 26
(B) 27
(C) 32
(D) 54

Question: 4　　　　QID: 8641

Tickets at a play cost $10 or $14. If 800 tickets were sold and $9,040 was collected by the box office, how many $14 tickets were sold?

(A)　100
(B)　260
(C)　540
(D)　710

Question: 5　　　　QID: 8653

After Terri wins a $100,000 payout in the lottery she donates 20% to charity, gives 25% to her family and friends, spends 14.5% on herself, and pays 30% in taxes. The remainder is in accounts earning simple interest of 14% and 11%. If her total interest is $1335, how much is in each account?

(A)　$4000 at 14% , $4500 at 11%
(B)　$5000 at 14% , $5000 at 11%
(C)　$6000 at 14% , $4500 at 11%
(D)　$7000 at 14% , $3500 at 11%
(E)　None of the above

Question: 6　　　　QID: 8654

John has $1800 hidden under his mattress and $250 in the cookie jar.
He decides to take his money to a bank, where he divides it between an investment earning 8% and an investment earning 9.5%. If he earns $181.25 in simple interest, how much is in each account?

(A)　$200 at 8%, $1600 at 9.5%
(B)　$900 at 8%, $900 9.5%
(C)　$900 at 8%, $1150 at 9.5%
(D)　$1800 at 8%, $250 at 9.5%
(E)　None of the above

Question: 7　　　　QID: 8656

Kelly has $800, which she divides between two savings accounts. One account earns 2% simple interest and the other earns 5%. If she earns $31 in interest between the two accounts, how much is in each?

(A)　$100 at 2%, $700 at 5%
(B)　$250 at 2%, $550 at 5%
(C)　$300 at 2%, $500 at 5%
(D)　$500 at 2%, $300 at 5%
(E)　None of the above

Question: 8   QID: 8658

Bobby has a bond earning 11% yearly interest and another bond worth 3 times as much earning 10% simple interest. If the total yearly interest is $307.50, find the value of each bond.

(A) $600, $1800
(B) $750, $2250
(C) $900, $2700
(D) $1050, $3150
(E) None of the above

Question: 9   QID: 8660

Sally has $600 from her piggy bank. She keeps half of it in a savings account and the other half in a second account earning 1% more. If she earns $27 a year in simple interest for the year, what is the interest rate on each account?

(A) 3% and 4%
(B) 4% and 5%
(C) 5% and 6%
(D) 9% and 10%
(E) None of the above

Question: 10   QID: 8698

Amy takes out a loan of $6500 to start a business building and selling rocking chairs. If the chairs cost $35 to build and she can sell them for $100 each, how many must she sell to pay off the loan?

(A) 183 chairs
(B) 49 chairs
(C) 65 chairs
(D) 100 chairs
(E) None of the above

Question: 11   QID: 19426

A rectangular family room is twice as long as it is wide. The perimeter is 96 feet. Find the length of the family room.

(A) 12 feet
(B) 16 feet
(C) 32 feet
(D) 64 feet

Question: 12   QID: 19602

Al's bowling average is 104. If his scores for three games were 100, 91, and 101, what score does he need in the fourth game to maintain his average?

(A) 105
(B) 120
(C) 122
(D) 124

Question: 13   QID: 19603

One third the sum of two consecutive numbers is one less than the smaller. Find the numbers.

(A) 2 and 3
(B) 4 and 5
(C) 6 and 7
(D) 8 and 9

Question: 14   QID: 19665

What was an employee's original salary if the employee earns $7.02 per hour after an 8% raise?

(A) $6.46 per hour
(B) $6.50 per hour
(C) $3.90 per hour
(D) $6.94 per hour

Question: 15   QID: 19667

A store has a clearance sale where every item is reduced by 40%. What was the original price of a jacket if the sale price is $180?

(A) $220
(B) $240
(C) $300
(D) $450

Question: 16   QID: 19669

Javier invests money in two accounts. He
invests twice as much in an account paying
10% simple interest as he does in an account
paying 5%. If he earns $187.50 in one year
from both accounts combined, how much did
he invest altogether?

(A) $1250
(B) $1500
(C) $2250
(D) $2812.50
(E) None of the above

Question: 17   QID: 30046

A pool at the park has a width of 15 feet and a
perimeter of 100 feet. What is the length of the
pool?

(A) 25 ft
(B) 35 ft
(C) 42.5 ft
(D) 70 ft
(E) None of the above

Question: 18   QID: 39065

Kate is a salesperson in a retail store and earns
$45 per week plus 5% of her weekly sales. If
Kate earned $680 one week, what were her
sales that week?

(A) $12,700.00
(B) $31.75
(C) $34.00
(D) $12,470.00
(E) None of the above

Question: 19   QID: 39079

Doug is a salesperson in a retail store and earns
$60 per week plus 12% of his weekly sales. If
Doug earned $336 one week, what were his
sales that week?

(A) $2,300.00
(B) $3,300.00
(C) $33.12
(D) $40.32
(E) None of the above

Question: 20   QID: 39085

Lisa pays $75 per day to rent the stand where she sells wind chimes. The materials for each chime costs $3, and she sell each chime for $6. How many wind chimes must she sell to make a profit of $312 per day?

(A) 387 chimes
(B) 237 chimes
(C) 79 chimes
(D) 129 chimes

Question: 21   QID: 39095

Lisa pays $115 per day to rent the stand where she sells wind chimes. The materials for each chime costs $3.5, and she sell each chime for $6. How many wind chimes must she sell to make a profit of $315 per day?

(A) 80 chimes
(B) 430 chimes
(C) 200 chimes
(D) 172 chimes

Question: 22   QID: 39123

The product of two consecutive integers is 8 more than the square of the smaller one. Find the integers.

(A) 8, 10
(B) –9, –8
(C) 8, 9
(D) 9, 10
(E) None of the above

Question: 23   QID: 39132

The product of two consecutive integers is –2 more than the square of the smaller one. Find the integers.

(A) –2, –1
(B) –2, 0
(C) 1, 2
(D) –1, 0
(E) None of the above

Question: 24   QID: 39134

The product of two consecutive integers is 3
more than the square of the smaller one. Find
the integers.

(A) –4, –3
(B) 3, 5
(C) 4, 5
(D) 3, 4
(E) None of the above

Question: 25   QID: 39137

The product of two consecutive integers is 9
less than the square of the larger number. Find
the numbers.

(A) 9, 10
(B) –9, –8
(C) 8, 10
(D) 8, 9

Question: 26   QID: 39138

The product of two consecutive integers is 9
more than the square of the smaller one. Find
the integers.

(A) 9, 10
(B) 9, 11
(C) 10, 11
(D) –10, –9
(E) None of the above

Question: 27   QID: 39189

Caleb walks his dog in a rectangular route. He
knows the total distance is 3811 yards and the
length of the shorter side of the route is 615
yards. What is the length of the longer side?

(A) 2,520.5 yd
(B) 2,521.5 yd
(C) 1,290.5 yd
(D) None of the above

Question: 28   QID: 39202

The perimeter of a rectangle is 46 inches. If the length of the rectangle is two inches less than four times the width, find the dimensions.

(A) length = 13.5 in., width = 6 in.
(B) length = 25 in., width = 7 in.
(C) length = 18 in., width = 5 in.
(D) length = 13.5 in., width = 4 in.
(E) None of the above

Question: 29   QID: 39215

The perimeter of a rectangle is 26 inches. If the length of the rectangle is one inch more than two times the width, find the dimensions.

(A) length = 9 in., width = 4 in.
(B) length = 7.5 in., width = 5 in.
(C) length = 14 in., width = 6 in.
(D) length = 14 in., width = 3 in.

Question: 30   QID: 39229

A garden is 3.1 times as long as it is wide. It has a perimeter of 93.48 feet. How wide is the garden?

(A) 30.2 feet
(B) 11.4 feet
(C) 22.8 feet
(D) 35.34 feet
(E) None of the above

Question: 31   QID: 41175

Find the largest of two consecutive even integers whose sum is 778.

(A) 400
(B) 390
(C) 250
(D) 124
(E) None of the above

Question: 32　　　QID: 41496

A solution of 61% vinegar is to be mixed with a solution of 27% vinegar to form 102 L of a 40% solution. How many liters of the 61% solution must be used?

(A) 69 L
(B) 39 L
(C) 67 L
(D) 29 L
(E) None of the above

Question: 33　　　QID: 47163

To get a B in math, a student must score an average of 80 on five tests. On the first four tests, a student's scores were 76, 88, 68, and 80. What is the lowest score that the student can get on the last test and still get a B?

(A) 72
(B) 88
(C) 87
(D) 86
(E) None of the above

Question: 34　　　QID: 47186

To get a B in math, a student must score an average of 80 on five tests. On the first four tests, a student's scores were 76, 91, 64, and 85. What is the lowest score that the student can get on the last test and still get a B?

(A) 68
(B) 83
(C) 86
(D) 84
(E) None of the above

Question: 35　　　QID: 47189

After taking 6 quizzes, your average is 76 out of 100. What must your average be on the next five quizzes to increase your average to 81?

(A) 87
(B) 78
(C) 84
(D) 90
(E) None of the above

Question: 36   QID: 47192

After taking 7 quizzes, your average is 74 out of 100. What must your average be on the next five quizzes to increase your average to 79?

(A) 86
(B) 83
(C) 87
(D) 76
(E) None of the above

Question: 37   QID: 54063

Frank is on a 5 day driving trip across the country. He plans on averaging 10 hours of travel per day. If he has traveled 8, 12, 7, and 9 hours respectively over the first four days of the trip, how many hours does he need to drive on the last day?

(A) 15
(B) 14
(C) 13
(D) 11
(E) None of the above

Question: 38   QID: 54065

Andy bikes an average of 45 miles per day, five days a week. If he has already been on bike rides of 26, 35, 48, and 60 miles this week, how long does his last ride of the week need to be?

(A) 56
(B) 54
(C) 58
(D) 45
(E) None of the above

Question: 39   QID: 54069

Bobby has a bag containing 2 sizes of marbles. The big ones weigh 6 g and the small ones weigh 2 g. If there are twice as many small ones as big ones and the bag weighs 280 g, how many big marbles does he have?

(A) 56
(B) 35
(C) 28
(D) 22
(E) None of the above

Question: 40   QID: 54072

Eddie spills his cash register drawer on the
floor and has to sweep up the coins. He has
742 coins which are a mixture of pennies,
nickels, dimes, and quarters. There are 10
times as many pennies as dimes, and half as
many quarters as dimes. If he has $26.60 how
many dimes are there?

(A) 38
(B) 42
(C) 44
(D) 46
(E) None of the above

Question: 41   QID: 54081

A shirt is marked 20% off and the sale price is
$28.00. What was the original price?

(A) $28.00
(B) $140.00
(C) $32.00
(D) $35.00
(E) None of the above