HPW
REAL ESTATE SCHOOL

MATH
PRACTICE EXAM #1

- **All calculations utilize the 30-Day Month/360 Day Year Method**

- **All costs per period have been rounded to 2 decimal places ($3.66 per day) for each time period (Day, Month etc.)**

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1. Donald has purchased a tract of land containing 82.63 acres and plans to develop it into individual lots averaging 85' x 145'. Assuming that he must set aside 10% of the land for streets and sidewalks, how many whole lots can he develop from this tract?

   A. 263
   B. 292
   C. 236
   D. 232

2. Arnold has recently sold his house for $600,000 which represents a profit of 25% over what he had originally purchased the home for. How much did he originally pay for his home?

   A. $450,000
   B. $480,000
   C. $500,000
   D. $750,000

3. Michael has been paid $5,220 from a recent sale. His company received 3% of the sales price as the selling firm and they paid 60% of the amount they received to Michael as his share. How much did Michael sell the house for?

   A. $145,000
   B. $174,000
   C. $290,000
   D. $580,000

4. **Kim has found a new house to purchase and will need to "net" $375,000 from the sale of her current home after paying her broker a 6% sales commission. What will be the minimum amount that she will need to sell her home for? (round to whole number)**

   A. $352,500
   B. $394,737
   C. $397,500
   D. $398,936

5. **Gerald has recently sold his house for $253,330, which is 54% more than he had originally paid. How much did he pay for the house?**

   A. $116,532
   B. $136,788
   C. $164,500
   D. $199,330

6. **The property management agreement calls for the manager to be paid 7% commission for all rents collected at a 10-unit apartment building. Each unit rents for $750 per month. Assuming 1 unit was vacant, 2 units were rented for 21 days and the remaining were fully leased for the month, how much did the property manager earn?**

   A. $525.00
   B. $493.50
   C. $404.25
   D. $441.00

7. A homeowner owes $131,624.33 on his mortgage loan. The PITI payment is $1,208.33 of which $170 is allocated to T&I. Assuming his interest rate is 7 1/2% what will be the outstanding loan balance after the next monthly payment?

   A. $130,585.99
   B. $131,238.65
   C. $131,407.57
   D. $131,408.65

8. A homebuyer is applying for a mortgage loan. His annual gross income is $54,000 and he has total monthly debts of $725 of which $350 is for a car payment that will be paid off in five months. If the lender utilizes the 28%/36% rule, what would be the maximum housing expenses this borrower would qualify for per month?

   E. $895
   F. $1,245
   G. $1,260
   H. $1,620

9. A property has just been sold for $192,000 in which the appraised value is $190,000. The lender agrees to make a 90%L/V mortgage at 6 3/8% with one point for loan origination. Assuming the investor demands a 7 1/4% yield, what would be the total amount collected for all types of points at the closing?

   A. $15,360
   B. $11,970
   C. $12,096
   D. $13,680

10. Jose has recently purchased a home for $235,000 and has obtained a mortgage for $211,500. Terms of the mortgage call for 7% interest on the thirty-year loan with monthly PITI of $1,602.11 of which $195 is allocated to taxes and insurance. What amount will represent the total amount of interest that will be paid over the life of this mortgage loan?

   A. $295,059.60
   B. $365,259.60
   C. $444,150.00
   D. $506,559.60

11. Dana has agreed to sell her property to Matt with settlement to be on November 26. Property taxes for the year are $1,890 and have already been paid. How will the resulting entry appear on the settlement worksheet?

   A. $178.50 Debit - Buyer, Credit - Seller
   B. $1,711.50 Debit – Buyer, Credit - Seller
   C. $294 Credit – Seller, Debit - Buyer
   D. $1,596 Credit – Buyer, Debit – Seller

12. Michael has recently contracted to purchase a home for $185,500 and applied for a 90% LTV mortgage at 6.75% interest. If he closes on this loan on June 11th, how would the entry for prepaid interim interest appear on the closing statement?

   A. $626.00 Debit -Buyer
   B. $695.63 Debit -Buyer
   C. $594.70 Debit -Buyer
   D. $660.82 Debit -Buyer

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13. Roberta has purchased a rental duplex that rents for $900 per month per unit. The settlement is scheduled for the 21st of the month. Assuming that all rents have been collected how much would the seller owe the buyer at settlement?

A. $270
B. $540
C. $630
D. $1,260

14. Pam has agreed to sell her house for $176,500 with the purchaser to obtain a 90% L/V mortgage at 8% interest. Closing is set for April 18th. The lender will collect at closing the following: applicable pre-paid interim interest, 1 % loan origination fee, and 2 discount points. The loan payoff is $132,325 and is paid current. The property taxes are $1,080 for the year and are to be pro-rated as applicable. The responsible party has agreed to pay $75 for the deed preparation, appropriate amount for revenue stamps, and a 6% commission. The purchaser has paid a $2,500 earnest money deposit at the time of the offer and will also incur $1,650 in miscellaneous costs in order to close. How much money will the buyer pay in order to close on this purchase? (Round entries to whole dollar amount.)

A. $21,242
B. $21,700
C. $22,348
D. $26,700

15. **Wendy wants to sell her home and net $28,000 in order to purchase her new home. She will incur expenses of $2,500 for miscellaneous costs, loan payoff of $121,750, and has agreed to pay the agent a 6% commission. How much must she sell the home for in order to meet her goal? (Round to whole dollars)**

   A. $161,385
   B. $161,968
   C. $159,308
   D. $158,735

ANSWER KEY

Math Practice Exam #1

1.	D
2.	B
3.	C
4.	D
5.	C
6.	D
7.	D
8.	B
9.	D
10.	A
11.	A
12.	A
13.	C
14.	B
15.	B

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SOLUTIONS

1. **43,560 x 82.63 = 3,599,362.8 Total Square Feet**
   3,599,362.8 x .1 O = 359,936.28 Square Feet for streets and sidewalks
   3,599,362.8 -359,936.28 = 3,239,426.6 Square Feet for lots
   85 x 145 = 12,325 Square Foot Per
   3,239,426.6 + 12,325= 262.83 # of Lots
   * Only 262 whole Lots Can be Obtained.

2. **$600,000 / 125% = $480,000   Originally paid**

3. **3% X 60% = .018   Michael's share of Commission**
   $5,220 / .018 = $290,000 Sales Price

4. **$375,000 / 94% = $398,936 Minimum Sales Price**

5. **$253,330 + 1.54 = $164,500 originally paid**

6. **$750 + 30 = $25 Rent per day**
   $25 x 21 = $525 Rent for 21 days
   $525 x 2 = $1,050 Total Rent -2 units
   $750 x 7 = $5,250 Total Rent-7 units
   $1,050 + 5,250 = $6,300 Total Rent Collected
   $6,300 x .07 = $441 Total Commission Due

7. **$1,208.33 -170 = $1,038.33 P&I/Month**
   $131,624.33 x .075 = $9,871.83 interest /year
   $9, 871.83 + 12 = $822.65 Int due 1st month
   $1,038.33 - 822.65 = $215.68 Prin. 1st Month
   $131,624.33- 215.68 = $131,408.65 balance after next pay

8. **$54,000 + 12 = $4,500 Int/Month**
   $725 -350 = $375 Monthly Debt that "count"
   $4,500 x 36% = $1,620 Max total Monthly Debt
   $1,620- 375 = $1,245.00 Max housing expenses

9. $190,000 x .90 = $171,000 Loan Amount
$171,000 x .01 = $1,710 Cost of L.O.F.
7.25% (7 2/8)- 6 3/8 = 7 /8 or 7 points
$171,000 x .07 = $11,970 Cost of Discount Points
$1,710 + $11,970 = $13,680 Total Cost of All Points

10. $1,602.11 = $195 = $1,407.11 P&I/Month
$1,407.11 x 360 = $506,559.60 Total P&I paid
$506,559.60 -$211,500 = $295,059.60 Total Int Paid

11. 11/26 – 12/30 = 34   Days Seller will owe Buyer
$1,890 / 360 = $5.25   Taxes per Day
$5.25 X 34 = $178.50   Debit – Buyer, Credit – Seller

12. $185,500 x .90 = $166,950 Loan Amount
$166,950 x .0675 = $11,269.13 Interest/year
$11,269.13 + 360 = $31.30 Interest per day
June 11 -30 = 20 Days
31.30 x 20 = $626.00 Debit -Buyer
Note: Buyer pays pre-paid interim interest for June 11th

13. $900 X 2 = $1,800   Total Rent per Month
$1,800 / 30 = $60   Rent per Day
1-21 = 21 Days Seller Owes Buyer
$60 X 21 = $1,260   Debit – Seller, Credit – Buyer

14.

Item	Debt	Credit
Sales Price	$176,500	
Loan Amount		$158,850
Interim Interest	$459	
Origination Fee	$1589	
Discount Points	$3,177	
Property Taxes		$324
Earnest Money		$2,500
Miscellaneous Fees	$1650	
	$183,375	$161,674.00
Needed to Close		$27,701
	$183,375	$183,375

15. 28,000 + $2,500 + $121,750 = $152,250 (94% of Needed Sales Price
$152,250 + .94 = $161,968.08 Minimum Sales Price Needed