Mat 011 Agenda Day 6       May 25, 2005

Review for Test 1
Test 1

Homework: Read Topic 12
<table>
<thead>
<tr>
<th>min</th>
<th>cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/3</td>
<td>1.90</td>
</tr>
<tr>
<td>5</td>
<td>1.90 (0.30(5-3)+1.90)</td>
</tr>
<tr>
<td>10</td>
<td>4.00 (0.30(10-3)+1.90)</td>
</tr>
</tbody>
</table>
\[
\begin{align*}
C &= 0.30 (m - 3) + 1.90 \quad m \geq 3 \\
C &= 0.30 m - 0.90 + 1.90 \\
C &= 0.30 m + 1.00 \quad m \geq 3
\end{align*}
\]

\[
\begin{align*}
5.20 &= 0.30 m + 1.00 \\
-1.00 &= -1.00 \\
4.20 &= 0.30 m \\
\frac{4.20}{0.3} &= \frac{14}{3} m
\end{align*}
\]
\[ 1.40 \times 20 = 28.00 \]

\[ 40 \times 20 = 800 \]

\[ \frac{40}{OP} \cdot OP = PS \]

\[ OP \cdot (40 + 1) = OP \cdot 1.40 = PS \]
PS = 1.40 (WP)

82 = 1.40 (WP)

\[
\frac{82}{1.40} = 58.57 = WP
\]

1.40 (200) = $280
NS = 1.40 OS

\[
\frac{52.0}{1.40} = \frac{1.40}{1.40}
\]

\[\$ 371.42 = OS\]
Remain #16

25% off

<table>
<thead>
<tr>
<th>Original Price</th>
<th>25% Off</th>
<th>You Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10</td>
<td>.75(10)</td>
<td>$7.50</td>
</tr>
<tr>
<td>$17</td>
<td>.75(17)</td>
<td>$12.75</td>
</tr>
</tbody>
</table>

\[ \text{SP} = .75 \times C \]
\[ 11.95 = .75 \times C \]
\[ \frac{11.95}{.75} = C \]
\[ 15.93 = C \]

\[ 10 - .25(10) = 7.50 \]
\[ \ln C - .25 C = SP \]
\[ .75 C = SP \]
\[ .75 C = \frac{11.95}{.75} = 15.93 \]
\[ C = 285 - 15t \]
\[ = 285 - 15(2) \]
\[ C = 255 \text{ ppm} \]

\[ C = 285 - 15t \]
\[ 60 = 285 - 15t \]
\[ -285 \quad -285 \]
\[ -225 = -15t \]
\[ -15 \]
\[ 15 \text{ years} = t \]
\[ C = 285 - 15t \]
\[ 0 = 285 - 15t \]
\[ -285 = -15t \]
\[ t = \frac{1997}{2016} \]
1. WWW Drillers charge their customers $350.00 to come to the well site and $20.00 per foot to drill a well.
   a. Complete the table.

<table>
<thead>
<tr>
<th>DEPTH OF WELL</th>
<th>CALCULATION</th>
<th>COST ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. WVVV Drillers charge their customers $350.00 to come to the well site and $20.00 per foot to drill a well.

If a person is charged $2,150.00 for a well, how deep is the well?
Take – Taxi Co. charges $1.35 immediately upon entering the taxi. The first 3 miles are free, and after that, it costs $1.80 per mile.

If it cost $27.50, how far was your ride?
Professor Failure computes his grades as follows: Tests: 60%; Homework: 15%; Final Exam: 25%

Otto has a test average of 82, homework average of 99, and a final exam score of 71. What is Otto’s grade for the course?
Take –Taxi Co. charges $1.35 immediately upon entering the taxi. The first 3 miles are free, and after that it costs $1.80 per mile.

Complete the table.

<table>
<thead>
<tr>
<th>MILES</th>
<th>CALCULATION</th>
<th>COST ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Professor Failure computes his grades as follows:
Tests: 60%; Homework: 15%; Final Exam: 25%

Tito has a test average of 71 and a homework average of 76. What does Tito have to get on the final to get a 70 for the course?
Clancy's Burgers has given a 12% raise to all of its employees.

Complete the table below.

<table>
<thead>
<tr>
<th>OLD SALARY</th>
<th>CALCULATION</th>
<th>NEW SALARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.00 per hr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$3.00 per hr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X per hr</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Clancy’s Burgers has given a 12% raise to all of its employees.

If your new salary is $5.25 per hour, what was your old salary?
Stats Department store is having a 20% off sale.

Complete the table

<table>
<thead>
<tr>
<th>ORIGINAL PRICE</th>
<th>CALCULATION</th>
<th>SALE PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORIGINAL PRICE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>10.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Stats Department store is having a 20% off sale.

If the sale price was $81.00, what was the original price?
The graph shows the net profits and losses for Rose Stores for the years 1990 through 1993.
73 - (-162) = 235
-162 - (73) = -235
1991 - 1992
\[ C = \frac{5}{9} (F-32) \]

\[ 9\left(\frac{11}{1}\right) = \frac{5}{9} \left(\frac{F-32}{1}\right) \]

\[ 99 = 5 (F-32) \]

\[ \frac{99}{5} = F-32 \]

\[ \frac{99}{5} + 32 = F \]

\[ 19.8 + 32 = F \]

\[ 51.8 = F \]
\[ W_A = 0.08S + 10,000 \]

\[ W_B = 0.13S + 4,000 \]

\[ W_A = W_B \]

\[ 0.08S + 10,000 = 0.13S + 4,000 \]

\[ 0.08S + 6,000 = 0.13S \]

\[ -0.08S \]

\[ 6,000 = 0.05S \]

\[ 120,000 = S \]
The graph shows the net profits and losses for Rose Stores for the years 1990 through 1993.

What is the difference between the profit or loss in 1990 and that in 1992?
The graph shows the net profits and losses for Rose Stores for the years 1990 through 1993.

What is the difference between the profit or loss in 1993 and that in 1991?
Simplify $-2(x - 3) + 2(4 - x)$
Is $x = -3$ a solution to $x^2 + 6x + 9 = x + 3$?
Solve: $7x - 8 = -29$
Solve: \[ 8x - 3(4x - 5) = -2x - 11 \]
11. A business manager has determined that the cost per unit for a camera is $70 and that the fixed costs per month are $3,500. Find the number of cameras that are produced during a month in which the total cost was $21,000. Use the equation

\[ T = U*N + F \]

where \( T \) is the total cost, \( U \) is the cost per unit, \( N \) is the number of units produced, and \( F \) is the fixed cost.