MARKET RESEARCH

Math Quiz Hints:

1.) 70 / 100 x 1,773,120=
2.) 33% is greatest response

3.) 2010 sales at quick-service restaurants= 164.8 / (100+3) / 100=
2010 to 2011 growth at quick-service restaurants =164.8 – 160=
2010 sales at full-service restaurants = 184.2 / (100+1.2) / 100=
2010 to 2011 growth at full-service restaurants = 184.2 – 182=

4.) 96+21 + 43=

5.) 24 / 100 x 1400 =
18 / 100 x 9600 =

6.) 34,000 + 44,000 + 21000) / 3 =

7.) 15 / 200 x 100 =
10 / 60 x 100 =

8.) (20+13) / (20 + 13 + 22 + 32) x 100 =

9.) Total customer surveyed = 5 + 8 + 12 + 16 + 22 + 28 + 9 =
80% of 100 =
28 Saturday} + 22 {Friday} + 16 {Thursday} + 12 {Wednesday} + 9 {Sunday} =

10.) 5 / 913 x 100=

LOCATION SELECTION

Math Quiz Hints:

1.) Property B monthly costs = $2300 + $300 + $250 + $2400 per quarter / 3 months per quarter = $3,650 per month

2.) Rent = 8 / 100 x 125,000 =
Common are fees = 3 / 100 x 10,000 =

3.) 20,000 x (100 – 60) / 100=

4.) 8,000 -4 x 400 =

5.) (5000,000 -75,000) / 2,350,000 x 100 =

6.) Mortgage interest = 2,000,000 x 7 / 100 / 12 months per year =

7.) ROI = Profit / Investment x 100
Profit = Revenue x 10 / 100
By substitution, ROI = Revenue x 10 / 100 / Investment x 100
Insert values and simplify, 15 = Revenue x 10 / 1,5000,000
Revenue = 15 x 150,000 / 10 =

8.) Two are less than $33,000; two are greater than $33,000

9.) ROI = Profit / Investments x 100
20 = 50,000 / Investment x 100
Investment = 50000 x 100 / 20=

10.) (2000,000 + 3000,000) / 1000 x 11=

FINANCIAL STATEMENTS

Math Quiz Hints:

1.) 500 – 45 – 56 – 112 – 31 – 189 – 48 =

2.) 2,500 / 12,890 x 100=

3.) 4, 875 + 15,515 + 2,212 =

4.) 12,222 x 70 / 100 – 6,250 =

5.) Utility growth = (267 – 233) / 233 x 100 =
Staffing growth = (1,411 – 1,266) / 1,266 x 100 =

6.) 45,321 – 32,567 =

7.)

8.) 29,345 / 1,174,344 x 100 =

9.) 60% - 35% - 10% - 5% =

10.) 23,487 – 8,123

MENU DESIGN

Math Quiz Hints:

1.) 12 x 11.25 – 40.15 =

2.) (2.76 x 57) / 435.98 x 100 =

3.) Total margin on appetizers = 1000 x .50=
Total margin on entrees = 100x 5 =

4.) (Gross Margin on food x 1200 + gross margin on beverage x 800) / (1200 + 800)

5.) Spaghetti sales = 340 x 12 =
Steak sales + 212 X16 =

6.) Gross margin before = 800 x (1-.25) + 500 x (1-.2) =
Gross margin after= 600 x (1-.25) + 700 x (1-.2) =

7.) 17 x 11 x (1-20 / 100) =

8.) Gross margin before – 4,567 x (1-22) / 100) =
Gross margin after = 5,112 x (1-28 / 100) =

9.) 1,200 x (1 + 20 / 100) =

10.) Additional margin per day = 10x (8.95 – 2.87) =

Days to recoup costs = Costs / Additional margin per day = (50+100) / 60.80=

PURCHASING

Math Quiz Hints:

1.) 4 / 5 =
2.)

3.) 17,500 + 19,252 – 15,757=

4.) 28,000 + 21,000 – 45,000 =

5.)

6.) 22 gals / 4 gals per day =

7.) 25 – 10 =

8.) 100 steaks / 5 steaks per day =

9.)

10.) 5,550 + 13,000 – 2,333 =

LAYOUT

Math Quiz Hints:

1.) 17 x 4 + 28 x 2 + 15 x 6 + 5 x 10 =
2.)
3.) 97 + 83 +179 +57 =

4.) 60 minutes per hour / 6 minutes per meal per grill x 2 meals at a time on a grill =
50 meals per hour / 20 meals per grill per hour =
Round up to 3 grills

5.) 20 tables x $50 per table =
$3,000 / $1,000 per turn =

6.) 20 meals x $20 per meal =
$400 x (1 -25 / 100) =
$9000 / $30 days

7.) Dishwasher capacity is 100 meals of any kind per hour
Stove capacity is 30 / (60 / 100) = 50 meals of any kind per hour

8.) 2,570 – 2 x (10 x 12) – 30 x 15 – 1000 =
29 x 29 =

9.) 23 x 3200 / 12 =

10.) Savings = 3,300 x .2 =

25,000 / 660 per month =

STAFFING

Math Quiz Hints:

1.) 15 – 4 = 16 – 1= 6 – 2 = 6 – 2 = 5 – 0 =

2.) 1 manager per shift x 3 shifts per day x 7 days per week plus one additional for Friday dinner and one additional for Saturday dinner

3.) 56.95 x (15 / 100) =
Rounds to $8.50

4.) 191.40 x (18 / 100) =

5.) Host capacity = 20 parties per hour per host x 1 host =
Server capacity = 10 parties per hour per server x 2 servers =
Cook capacity = 15 parties per hour per cook x 1 cook =
Cook capacity is the lowest

6.) 500,000 + 500,000 x (6025 / 100 + 1.4 / 100) =

7.) 6,000 per week x 52 weeks per year x 30% =

8.) 25 x 1.5 =

9.) $8,000 / 20 employees / 200 per employee per course=

10.) 2 dishwashers x $12 per hour x 10 hours per week =

Using half as many dishwashers saves $240 / 2 =

$3,000 / $120 per week=

MARKETING

Math Quiz Hints:

1.) 125,000 x 3 / 100=

2.) 450/ 3,750 x 100=

3.) Old spending = 5,500 / (1 +10 / 100) =
Spending increases + 5,500 – 5,000 =
Margin increase + 1,000 x (70 / 100) =

4.) 1,200 / 20 =
3,200 / 80 =
(60 – 40) / 60 x 100 =

5.) 3 x 5 40 =

6.) 10 x 45 + 1 x 300 + 7 x 35 =

7.) 10,000 x (1 + 20 / 100) ^ 4 =
4^{th} power used because growth occurs from year 1 to 2, 2 to 3, 3 to 4, and 4 to 5.

8.) $3 / 1000 x 87,000 =

9.) 0.1 / 100 x 5,000 x 35 x 80 / 100 =

10.) B = TV + P + Radio

Radio = TV

B = 2 X TV + P

B – P + 2 x TV

TV = (B – P) / 2