


Name: Kent [redacted]

ID# [redacted]

Fina450/1 AA (SUMMER 2011) Quiz #2A (worth 5%) May 26<sup>th</sup>, 2011

- ① < • Rentable area (Office): 15,000 square feet
  - Net Rent rate per year (Office): \$12.50 per square foot
  - ② < • Rentable area (Retail): 12,000 square feet
  - Net Rent rate per year (Retail): \$14.75 per square foot
  - ③ < • Rentable area (Ground): 16,000 square feet
  - Net Rent rate per year (Ground): \$16 per square foot
  - ① • Vacancy and credit losses (Office)
    - Year 1: 12% > 0.03
    - Year 2: 9% > 0.03
    - Year 3 and thereafter: 7% > 0.02
  - Vacancy and credit losses (Ground):
    - ③ ○ Year 1: 16% > 0.04
    - Year 2: 12% > 0.02
    - Year 3: 10% > 0.02
    - Year 4 and thereafter: 5% > 0.05
  - Inflation: 2.45% per annum
  - Leases: renewed every 4 years
  - Operating costs and realty taxes: \$7.80 per square foot
- ② Retail - no vacancy.
- 

### ① Office

15'000 \* \$12.50

Vacancy

Rev	{	Yr 1	$15'000 * .88 * 12.50 = 165'000$	
		2	$15'000 * .03 * 12.50 (1.0245) = 5'763$	170'763
		3	$15'000 * .02 * 12.50 (1.0245)^2 = 3'936$	174'699
		4	<del>15'000</del>	174'699
		5	$165'000 (1.0245)^4 + 9'699 = 191'473$	

SP	{	Yr 1	$15'000 * .12 * 7.80 = 14'640$	
		2		
		3		
		4		
		5	$15'000 * .07 * 7.80 (1.0245)^4 = 9'023$	

182'450

### ② Retail

12'000 \* 14.75

No vacancy

Yrs 1-4 =  $12'000 * 14.75 = 177'000$

Yr 5 =  $177'000 (1.0245)^4 = 194'994$

### ③ Ground

16'000 \* 16

Vacancy

Rev	{	Yr 1	$16'000 * .84 * 16 = 215'040$	
		2	$16'000 * .04 * 16 (1.0245) = 10'491$	29'629
		3	$16'000 * .02 * 16 (1.0245)^2 = 5'374$	
		4	$16'000 * .05 * 16 (1.0245)^3 = 13'764$	
		5	$215'040 (1.0245)^4 + 29'629 = 266'530$	

Yr 1  $16'000 * .16 * 7.80 = 19'968$

2

3

4

5

$16'000 * .05 * 7.80 (1.0245)^4 = 6'874$

259'656

Name: Kelly [redacted]

ID# [redacted]

2A

**COMPLETE THE TABLES BELOW**

<b>Office Net Revenue:</b>	<b>for Year 5</b>	?	182,450 /
<b>Retail Net Revenue:</b>	<b>for Year 5</b>	?	194,994 /
<b>Ground Net Revenue:</b>	<b>for Year 5</b>	?	259,656 /
<b>Total Net Revenue:</b>	<b>for Year 5</b>	?	637,100 /

Name: [REDACTED]

ID# [REDACTED]

**Fina450/1 AA (SUMMER 2011) Quiz #2B (worth 5%) May 26<sup>th</sup>, 2011**

- ✓ • **Rentable area (Office): 15,000 square feet**
- ✓ • **Net Rent rate per year (Office): \$12.50 per square foot**
- ✓ • **Rentable area (Retail): 12,000 square feet**
- ✓ • **Net Rent rate per year (Retail): \$14.75 per square foot**
- ✓ • **Rentable area (Ground): 16,000 square feet**
- ✓ • **Net Rent rate per year (Ground): \$16 per square foot**
- **Vacancy and credit losses (Retail)**
  - Year 1: 12%
  - Year 2: 9%
  - Year 3 and thereafter: 7%
- **Vacancy and credit losses (Office):**
  - Year 1: 16%
  - Year 2: 12%
  - Year 3: 10%
  - Year 4 and thereafter: 5%
- **Inflation: 2.55% per annum**
- ✓ • **Leases: renewed every 4 years**
- ✓ • **Operating costs and realty taxes: \$8.70 per square foot**

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## FULL OCCUPANCY

$$\text{GROUND (YRS)}: 16,000 \times \$16 \times 1.0255^4 = \boxed{\$283,128} \rightarrow \text{NET REVENUE}$$

## PARTIAL OCCUPANCY

### OFFICE

#### YEAR 1 (84%)

$$(1-4): 0.84 \times 15,000 \times \$12.50 = \$157,500$$

$$(5-8): 157,500 \times 1.0255^4 = \boxed{\$174,190}$$

#### YEAR 2 (4%)

$$(2-5): 0.04 \times 15,000 \times \$12.50 \times 1.0255^1 = \boxed{\$7,691}$$

#### YEAR 3 (2%)

$$(3-6): 0.02 \times 15,000 \times \$12.50 \times 1.0255^2 = \boxed{\$3,944}$$

#### YEAR 4 (5%)

$$(4-7): 0.05 \times 15,000 \times \$12.50 \times 1.0255^3 = \boxed{\$10,111}$$

$$\therefore \text{TOTAL REVENUE} = \boxed{\$195,936}$$

### OFFICE $\rightarrow$ VCL

$$\text{YEARS}: 0.05 \times 15,000 \times \$8.70 \times 1.0255^4 = \boxed{\$7,216}$$

$$\therefore \text{OFFICE NET REVENUE} = \boxed{\underline{\underline{\$188,720}}}$$

### RETAIL

#### YEAR 1 (88%)

$$(1-4): 0.88 \times 12,000 \times \$14.75 = 155,760$$

$$(5-8): 155,760 \times 1.0255^4 = \boxed{172,266}$$

#### YEAR 2 (3%)

$$(2-5): 0.03 \times 12,000 \times \$14.75 \times 1.0255^1 = \boxed{5,445}$$

#### YEAR 3 (2%)

$$(3-6): 0.02 \times 12,000 \times \$14.75 \times 1.0255^2 = \boxed{3,723}$$

$$\therefore \text{TOTAL REVENUE} = \boxed{181,434}$$

### RETAIL $\rightarrow$ VCL

$$\text{YEARS}: 0.07 \times 12,000 \times \$8.70 \times 1.0255^4 = \boxed{8,082}$$

$$\therefore \text{RETAIL NET REVENUE} = \boxed{\underline{\underline{\$173,352}}}$$

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**COMPLETE THE TABLES BELOW**

<b>Office Net Revenue:</b>	<b>for Year 5</b>	?	\$188,720	/
<b>Retail Net Revenue:</b>	<b>for Year 5</b>	?	\$173,352	/
<b>Ground Net Revenue:</b>	<b>for Year 5</b>	?	\$283,128	/
<b>Total Net Revenue:</b>	<b>for Year 5</b>	?	\$645,200	/