	Ques	stion 1(a)	Ques	tion 2(a)
Job	Monthly income	Maximum monthly income (1/3)	10% monthly savings	Time (years) to save \$20,000
Health Care Aide	\$3,401.67	\$1,133.89	\$340.17	4.90
Mechanic	\$3,541.67	\$1,180.56	\$354.17	4.71
Real Estate Agent	\$4,623.42	\$1,541.14	\$462.34	3.60
Graphic Artist	\$3,473.83	\$1,157.94	\$347.38	4.80
Restaurant Manager	\$4,458.08	\$1,486.03	\$445.81	3.74
Firefighter	\$5,128.83	\$1,709.61	\$512.88	3.25

	Standard Insurance				
	Dedu	ctible			
	\$500	\$200			
Condominiur	n				
\$314.00	\$314.00	\$345.40			
Total	\$314.00	\$345.40			
Ste. Agathe					
\$519.00	\$519.00	\$570.90			
\$2.75	\$192.50	\$211.75			
Total	\$711.50	\$782.65			
Winnipeg					
\$692.00	\$692.00	\$761.20			
\$3.15	\$267.75	\$294.53			
Total	\$959.75	\$1,055.73			
Thompson					
\$519.00	\$519.00	\$570.90			
\$2.75	\$79.75	\$87.73			
Total	\$598.75	\$658.63			

	Comprehensiv	e Insurance
	Deduct	tible
	\$500	\$200
Condominiun	า	
\$348.00	\$348.00	\$382.80
Total	\$348.00	\$382.80
Sta Agatha		
Ste. Agathe		
\$571.00	\$571.00	\$628.10
\$3.03	\$212.10	\$233.31
Total	\$783.10	\$861.41
Winnipeg		
\$771.00	\$771.00	\$848.10
\$3.50	\$297.50	\$327.25
Total	\$1,068.50	\$1,175.35
Thompson		
\$571.00	\$571.00	\$628.10
\$3.03	\$87.87	\$96.66
Total	\$658.87	\$724.76

## 25-year mortgage with a 4% interest rate: different down payments

House	Cost
Condominium	\$139,900.00
Ste. Agathe	\$282,500.00
Winnipeg	\$309,900.00
Thompson	\$179,000.00

Mortgage term (in years)	25
Interest rate	4%
Amount paid per \$1000	\$5.26

Loan amount with a down payment of						
\$ 15,000,00\$	\$20,000,00	\$25,000,00				
\$124,900.00	\$119,900.00	\$114,900.00				
\$267,500.00	\$262,500.00	\$257,500.00				
\$294,900.00	\$289,900.00	\$284,900.00				
\$164,000.00	\$159,000.00	\$154,000.00				

House	Monthly payment			Monthly payment Total amount paid			d	T	otal interest pai	d
	\$15,000.00	\$20,000.00	\$25,000.00	\$15,000.00	\$20,000.00	\$25,000.00	\$15,000.00	\$20,000.00	\$25,000.00	
Condominium	\$656.97	\$630.67	\$604.37	\$197,092.20	\$189,202.20	\$181,312.20	\$72,192.20	\$69,302.20	\$66,412.20	
Ste. Agathe	\$1,407.05	\$1,380.75	\$1,354.45	\$422,115.00	\$414,225.00	\$406,335.00	\$154,615.00	\$151,725.00	\$148,835.00	
Winnipeg	\$1,551.17	\$1,524.87	\$1,498.57	\$465,352.20	\$457,462.20	\$449,572.20	\$170,452.20	\$167,562.20	\$164,672.20	
Thompson	\$862.64	\$836.34	\$810.04	\$258,792.00	\$250,902.00	\$243,012.00	\$94,792.00	\$91,902.00	\$89,012.00	

# Mortgage at 4% with a down payment of \$20,000: 25 vs. 20 years

House	Cost	Loan Amount
Condominium	\$139,900.00	\$119,900.00
Ste. Agathe	\$282,500.00	\$262,500.00
Winnipeg	\$309,900.00	\$289,900.00
Thompson	\$179,000.00	\$159,000.00

Mortgage term (in years)	25	20
Interest rate	4%	4%
Amount paid per \$1000	\$5.26	\$6.04

Habitation	Monthly Payment		Total Amo	ount Paid	Total Interest Paid		
	25 years	20 years	25 years	20 years	25 years	20 years	
Condominium	\$630.67	\$724.20	\$189,202.20	\$173,807.04	\$69,302.20	\$53,907.04	
Ste. Agathe	\$1,380.75	\$1,585.50	\$414,225.00	\$380,520.00	\$151,725.00	\$118,020.00	
Winnipeg	\$1,524.87	\$1,751.00	\$457,462.20	\$420,239.04	\$167,562.20	\$130,339.04	
Thompson	\$836.34	\$960.36	\$250,902.00	\$230,486.40	\$91,902	\$71,486.40	

# 25-year mortgage with a down payment of \$20,000: 4% vs. 6% interest

House	Cost	Loan Amount
Condominium	\$139,900	\$119,900
Ste. Agathe	\$282,500	\$262,500
Winnipeg	\$309,900	\$289,900
Thompson	\$179,000	\$159,000

Mortgage term (in years)	25	25
Interest rate	4%	6%
Amount paid per \$1000	\$5.26	\$6.40

Habitation	Monthl	Monthly Payment		ount Paid	Total Interest Paid		
	4%	6%	4%	6%	4%	6%	
Condominium	\$630.67	\$767.36	\$189,202.20	\$230,208.00	\$69,302.20	\$110,308.00	
Ste. Agathe	\$1,380.75	\$1,680.00	\$414,225.00	\$504,000.00	\$294,325.00	\$241,500.00	
Winnipeg	\$1,524.87	\$1,855.36	\$457,462.20	\$556,608.00	\$337,562.20	\$266,708.00	
Thompson	\$836.34	\$1,017.60	\$250,902.00	\$305,280.00	\$131,002.00	\$146,280.00	

# Section 5 (Task A)

Monthly Payment							
		25 years	25 years	20 years			
House	Cost	4%	6%	4%	Heating	Taxes	Condo Fees
Condominium	\$139,900.00	\$656.97	\$767.36	\$724.20	\$75.00	\$1,430.09	\$250.00
Ste. Agathe	\$282,500.00	\$1,407.05	\$1,680.00	\$1,585.50	\$146.00	\$3,895.15	
Winnipeg	\$309,900.00	\$1,551.17	\$1,855.36	\$1,751.00	\$175.00	\$3,865.86	
Thompson	\$179,000.00	\$862.64	\$1,017.60	\$960.36	\$275.00	\$3,132.63	

Income					
Health Care Aide	\$3,401.67				
Mechanic	\$3,541.67				
Real Estate Agent	\$4,623.42				
Graphic Artist	\$3,473.83				
Restaurant Manager	\$4,458.08				
Firefighter	\$5,128.83				

Ī	Health Care Aide			Mechanic			Real Estate Agent		
	25 years (4%)	25 years (6%)	20 years (4%)	25 years (4%)	25 years (6%)	20 years (4%)	25 years (4%)	25 years (%)	20 years (4%)
Condominium	28.70%	31.94%	30.67%	27.56%	30.68%	29.46%	21.11%	23.50%	22.57%
Ste. Agathe	55.20%	63.22%	60.44%	53.02%	60.72%	58.05%	40.61%	46.52%	44.47%
Winnipeg	60.22%	69.16%	66.09%	57.84%	66.42%	63.48%	44.30%	50.88%	48.63%
Thompson	41.12%	45.67%	43.99%	39.49%	43.87%	42.25%	30.25%	33.60%	32.37%

	Graphic Artist		Res	Restaurant Manager			Firefighter		
	25 years (4%)	25 years (6%)	20 years (4%)	25 years (4%)	25 years (6%)	20 years (4%)	25 years (4%)	25 years (6%)	20 years (4%)
Condominium	28.10%	31.28%	30.04%	21.90%	24.37%	23.40%	19.03%	21.18%	20.34%
Ste. Agathe	54.05%	61.91%	59.19%	42.12%	48.24%	46.12%	36.61%	41.93%	40.09%
Winnipeg	58.96%	67.72%	64.72%	45.95%	52.77%	50.43%	39.94%	45.87%	43.83%
Thompson	40.26%	44.72%	43.08%	31.37%	34.85%	33.57%	27.27%	30.29%	29.18%

# Section 5 (Task B)

Health Care Aide				
				est Rate or Table
Formula			Rate	Factor
Gross monthly family income		\$3,401.67	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,088.53	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	-	\$208.33	5	0.00582
Monthly heating costs	-	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	-		6	0.0064
Monthly mortgage payment your household can afford		\$805.20	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$145,606.58	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$160,606.58		

Mechanic				
				erest Rate ctor Table
Formula			Rate	Factor
Gross monthly family income		\$3,541.67	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,133.33	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	_	\$208.33	5	0.00582
Monthly heating costs	_	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	_		6	0.0064
Monthly mortgage payment your household can afford		\$850.00	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$153,707.66	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$168,707.66		

#### Appendix R: Home Finance, Grade 12 Essential Mathematics

## **Real Estate Agent**

			Fac	tor Table
Formula			Rate	Factor
Gross monthly family income		\$4,623.42	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,479.49	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	_	\$208.33	5	0.00582
Monthly heating costs	-	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	-		6	0.0064
Monthly mortgage payment your household can afford		\$1,196.16	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$216,304.40	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$231,304.40		

## **Graphic Artist**

				rest Rate tor Table
Formula			Rate	Factor
Gross monthly family income		\$3,473.83	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,111.63	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	_	\$208.33	5	0.00582
Monthly heating costs	_	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	_		6	0.0064
Monthly mortgage payment your household can afford		\$828.30	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$149,782.40	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$164,782.40		

### **Restaurant Manager**

			Fac	tor Table
Formula			Rate	Factor
Gross monthly family income		\$4,458.08	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,426.59	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	-	\$208.33	5	0.00582
Monthly heating costs	-	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	-		6	0.0064
Monthly mortgage payment your household can afford		\$1,143.26	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$206,737.19	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$221,737.19		

Firefighter				
				erest Rate ctor Table
Formula			Rate	Factor
Gross monthly family income		\$5,128.83	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,641.23	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	-	\$208.33	5	0.00582
Monthly heating costs	-	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	-		6	0.0064
Monthly mortgage payment your household can afford		\$1,357.90	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$245,550.93	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$260,550.93		

# Section 5 (Task C)

Hea	lth	Care	Aide
1100		Juic	AIUC

				rest Rate tor Table
Formula			Rate	Factor
Gross monthly family income		\$3,401.67	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,088.53	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	_	\$104.17	5	0.00582
Monthly heating costs	_	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	_	\$125.00	6	0.0064
Monthly mortgage payment your household can afford		\$784.37	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$141,839.06	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$156,839.06		

Mechanic				
				erest Rate tor Table
Formula			Rate	Factor
Gross monthly family income		\$3,541.67	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,133.33	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	_	\$104.17	5	0.00582
Monthly heating costs	_	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	_	\$125.00	6	0.0064
Monthly mortgage payment your household can afford		\$829.17	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$149,938.52	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$164,938.52		

## **Real Estate Agent**

			Fac	tor Table
Formula			Rate	Factor
Gross monthly family income		\$4,623.42	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,479.49	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	_	\$104.17	5	0.00582
Monthly heating costs	-	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	-	\$125.00	6	0.0064
Monthly mortgage payment your household can afford		\$1,175.33	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$212,537.07	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$227,537.07		

## **Graphic Artist**

				rest Rate tor Table
Formula			Rate	Factor
Gross monthly family income		\$3,473.83	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,111.63	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	_	\$104.17	5	0.00582
Monthly heating costs	_	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	_	\$125.00	6	0.0064
Monthly mortgage payment your household can afford		\$807.46	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$146,014.47	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$161,014.47		

### **Restaurant Manager**

			Fac	tor Table
Formula			Rate	Factor
Gross monthly family income		\$4,458.08	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses		\$1,426.59	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	_	\$104.17	5	0.00582
Monthly heating costs	_	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	_	\$125.00	6	0.0064
Monthly mortgage payment your household can afford		\$1,122.42	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford		\$202,969.26	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+	\$15,000.00	10	0.00894
Maximum affordable price		\$217,969.26		

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				erest Rate ctor Table
Formula			Rate	Factor
Gross monthly family income	\$5	5,128.83	2.5	0.00448
Multiply by 32% (GDSR)	×	32%	3	0.00473
Total affordable household expenses	\$	1,641.23	3.5	0.499
			4	0.00526
Subtract			4.5	0.00553
Monthly property taxes	-	\$104.17	5	0.00582
Monthly heating costs	-	\$75.00	5.5	0.0061
1/2 of condo fees (if applicable)	-	\$125.00	6	0.0064
Monthly mortgage payment your household can afford	\$	1,337.06	6.5	0.0067
			7	0.007
			7.5	0.00732
Interest rate (see factor table)	÷	4.5	8	0.00763
Monthly mortgage amount you can afford	\$24	1,783.00	8.5	0.00795
			9	0.00828
			9.5	0.00861
Down payment	+ \$15	5,000.00	10	0.00894
Maximum affordable price	\$256	6.783.00		

# Section 6 (Task B)

		Condominium	Ste. Agathe	Winnipeg	Thompson
		\$139,900.00	\$282,500.00	\$309,900.00	\$179,000.00
On the first \$30 000	0%	\$	\$	\$	\$ -
On the next \$60 000	0.5%	\$300.00	\$300.00	\$300.00	\$300.00
On the next \$60 000	1.0%	\$499.00	\$600.00	\$600.00	\$600.00
On the next \$50 000	1.5%		\$750.00	\$750.00	\$435.00
On amounts in excess of \$200 000	2.0%		\$1,650.00	\$2,198.00	
	Total	\$799.00	\$3,300.00	\$3,848.00	\$1,335.00

# Section 7.2

	Condomi	nium	Ste. Ag	athe	Winnij	beg	Thomps	son
Frontage (in feet)	100		60		50		60	
	so 11%							
Assessed value	\$139,900.00		\$282,500.00		\$309,900.00		\$179,000.00	
Portioned assessment	45%	\$62,955.00	45%	\$127,125.00	45%	\$139,455.00	45%	\$80,550.00
Municipal mill rate	15.012	\$945.08	14.988	\$1,905.35	15.012	\$2,093.50	19.630	\$1,581.20
Improvements	\$13.50	\$148.50	\$12.26	\$735.60	\$8.40	\$420.00	\$12.65	\$759.00
	\$10.00	\$110.00						
School mill rate	14.717	\$926.51	14.787	\$1,879.80	14.717	\$2,052.36	18.528	\$1,492.43
Credit(s)	\$700.00	(\$700.00)	\$700.00	(\$700.00)	\$700.00	(\$700.00)	\$700.00	(\$700.00)
Total		\$1,430.09		\$3,820.75		\$3,865.86		\$3,132.63

# Section 7.3

### Scenario

System		eothermal	Na	atural Gas	Electric
Purchase price	\$	17,500	\$	4,500	\$ 2,500
Operating costs over 1 year	\$	544	\$	634	\$ 1,361
Price + 1 year (\$)	\$	18,044	\$	5,134	\$ 3,861
Price + 5 years (\$)	\$	20,220	\$	7,670	\$ 9,305
Price + 10 years (\$)	\$	22,940	\$	10,840	\$ 16,110
Price + 25 years (\$)	\$	31,100	\$	20,350	\$ 36,525

#### **Question 5**

System		thermal	Nat	tural Gas	Electric
Purchase price	\$	5,500	\$	4,500	\$ 2,500
Operating costs over 1 year	\$	544	\$	634	\$ 1,361
Price + 1 year (\$)	\$	6,044	\$	5,134	\$ 3,861
Price + 5 years (\$)	\$	8,220	\$	7,670	\$ 9,305
Price + 10 years (\$)	\$	10,940	\$	10,840	\$ 16,110
Price + 11 years (\$)	\$	11,484	\$	11,474	\$ 17,471
Price + 12 years (\$)	\$	12,028	\$	12,108	\$ 18,832

	Rent	Heating	Total (with insurance)					
			Standard	Insurance	Comprehensiv	ve Insurance		
House			\$500	\$200	\$500	\$200		
Condominium	\$1,500.00	\$75.00	\$1,749.00	\$1,766.40	\$1,801.00	\$1,823.60		
House in Ste. Agathe	\$1,300.00	\$146.00	\$1,718.00	\$1,745.20	\$1,792.00	\$1,826.60		
House in Winnipeg	\$1,700.00	\$175.00	\$2,168.00	\$2,197.30	\$2,248.00	\$2,285.30		
House in Thompson	\$1,800.00	\$275.00	\$2,274.00	\$2,293.90	\$2,327.00	\$2,352.20		

#### Insurance

	Amount to be		Standard Insurance Deductible			Comprehensive Insurance Deductible	
	Insured						
			\$500	\$200		\$500	\$200
Condominium	\$30,000		\$174.00	\$191.40		\$226.00	\$248.60
House in Ste. Agathe	\$55,000		\$272.00	\$299.20		\$346.00	\$380.60
House in Winnipeg	\$60,000		\$293.00	\$322.30		\$373.00	\$410.30
House in Thompson	\$35,000		\$199.00	\$218.90		\$252.00	\$277.20