

Chapter 7 BLM Answers

Prerequisite Skills

- a) 0.11 b) 0.039 c) 0.0015 d) 0.1205
e) -0.004 f) 0.005 g) 0.0225 h) -0.01125
- Answers may vary. Sample answers:
a) 20 b) 20 c) 200 d) 2
- a) 0.0138 b) 0.0063 c) 0.0122
d) 0.0022 e) 0.0024 f) 2.7397
- a) 52 weeks b) 13 weeks c) 0.5 year
d) 36 months e) 1.5 years f) 0.4 year
- a) 24 b) 78 c) 12 d) 5 e) 12 f) 5
- a) 625 b) 0.0625 c) 1.2597 d) 0.0029
e) 1.0777 f) 0.7679
- 1.2^{-2} , 1.08^{-2} , 1.005^{-1} , 1.08^2 , 1.13^2
- a) The table of values does not represent an exponential function since the ratios of successive y -values are not constant.

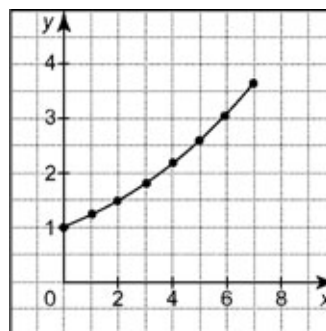
x	y	Ratio of y -values
0	0.08	4
1	0.32	2
2	0.64	1.5
3	0.96	$1.\bar{3}$
4	1.28	

- b) The table of values represents an exponential function since the ratios of successive y -values are constant.

x	y	Ratio of y -values
-2	3	2
-1	6	2
0	12	2
1	24	2
2	48	2

9.

x	$y = (1.2)^x$
0	1
1	1.2
2	1.44
3	1.728
4	2.0736
5	2.488 32
6	2.985 984
7	3.583 180 8

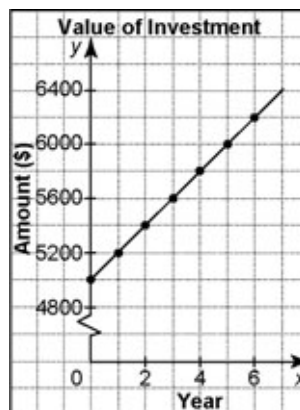


Section 7.1 Explore Simple Interest and Compound Interest

- a) \$150 b) \$450 c) \$1200 d) \$3000
- a) \$1150 b) \$5450 c) \$17 200 d) \$11 000
- a) \$2348.48 b) \$9665.71 c) \$10 411.90 d) \$7575.25
- a) \$348.48 b) \$665.71 c) \$411.90 d) \$75.25

5.

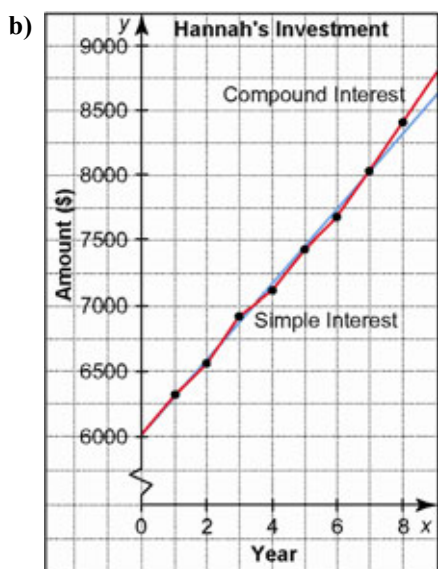
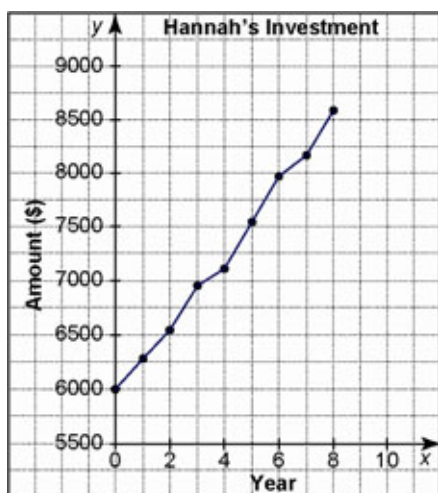
Year 1	Value (\$)
0	5000
1	5200
2	5400
3	5600
4	5800
5	6000
6	6200



- \$55.64 in Plan B.
- \$3394.10
- a) i) Plan A ii) Plan B
b) i) \$48.60 more in Plan A ii) \$94.01 more in Plan B

9. a)

Year	Amount (\$)
0	6000.00
1	6288.00
2	6589.82
3	6906.14
4	7237.63
5	7585.04
6	7949.12
7	8330.68
8	8730.55



Answers may vary. Sample answer: Compound interest grows faster than simple interest because interest for the next compounding period is also paid on the interest earned in the previous compounding period.

Section 7.2 The Compound Interest Formula

- a) \$657.97 b) \$2103.37 c) \$ 2636.76 d) \$32 274.34
- a) \$3642.11 b) \$3642.47 c) \$3642.66 d) \$3642.72
e) \$3642.78 f) \$3642.82
- a) \$11 179.07 b) \$9160.73 c) \$4530.48
d) \$9170.02 e) \$12 529.31
- a) \$10 805.03 b) \$14 024.48
- \$152.58 less in Plan B
- \$3706.00
- a) \$28 170.63 b) \$31 566.61 c) \$6566.61
- a) \$0.19
b) Yes; interest for \$120 in the savings account for 30 days (1 month) is \$0.25.

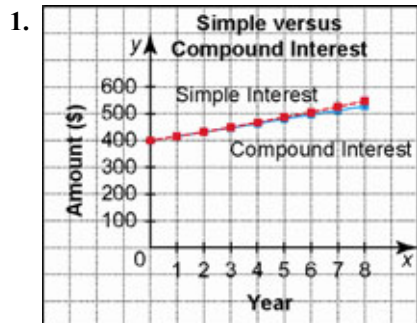
Section 7.3 Present Value

- a) 1333.75 b) 640.15 c) 1372.69 d) 684.21
- a) \$5404.51 b) \$451.50 c) \$529.95 d) \$3378.19
- \$8725
- \$12 760.96
- \$4736.46
- \$9443.30
- \$900.74
- a) \$28 155.23 b) \$6844.77
- a) \$7701.74 b) \$3401.74
- Plan A is the better deal. The discounted payment for \$2450 is \$2354.86. Plan B requires a total of \$3854.86 to be paid now, which is more than \$3750 required by Plan A.
- \$3259.55

Section 7.4 Solve Financial Problems Using Technology

- a) \$21 589.25 b) \$21911.23 c) \$22 080.40
d) \$22 196.40 e) 22 241.73
- \$5951.66
- \$3422.50
- a) \$18 872.00 b) \$19 386.97 c) \$18 886.25
- a) 18 years b) 36
- a) 17 years b) 34
- a) 5.42% b) 5.34% c) 5.31%
d) 5.29% e) 5.28%
- 4.93%
- 5.17%
- a) \$7317.39 b) \$6972.96 c) \$6659.97
- The \$7500 investment will reach \$10 000 half a year earlier than the \$6000 investment.
- No; on Glen's 65th birthday (49 years later), \$25 000 would grow to \$498 068.65.

Chapter 7 Review



2. \$93.04

3.

Year	Marc's Amount (\$)	Mike's Amount (\$)
0	2000	2000.00
1	2060	2060.00
2	2120	2121.80
3	2180	2185.45
4	2240	2251.02
5	2300	2318.55
6	2360	2388.10
7	2420	2459.75

4. a) \$1067.67 b) \$1845.41 c) \$5731.88

5. \$17 155.97

6. Plan 1; \$688.80

7. \$3415.46

8. \$1417.54

9. a) \$4002.55 b) \$4097.72

10. 9 years

11. 7.45%

12. \$201 340.72

Chapter 7 Practice Test

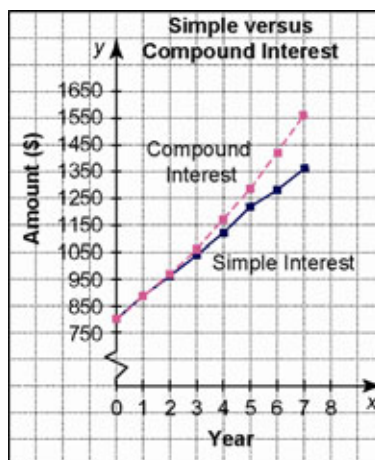
1. F 2. F 3. T 4. T 5. B 6. C 7. D

8. \$13 841.89

9. \$6700

10.

Year	Amount at Simple Interest (\$)	Amount at Compound Interest (\$)
0	800	800.00
1	880	880.00
2	960	968.00
3	1040	1064.80
4	1120	1171.28
5	1200	1288.41
6	1280	1417.25
7	1360	1558.97



11. \$2678.16

12. 12.5 years

13. 8.5 years

14. 4.47% per year

15. 8% per year, compounded semi-annually

Chapter 7 Test

1. F 2. F 3. F 4. B 5. A 6. C 7. B

8. 4.9% per year

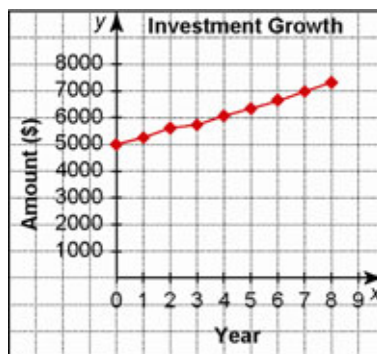
9. a) \$882.97 b) \$1941.50

10. a) \$1109.47 b) \$1997.17

11. \$3720.57

12.

Year	Amount (\$)
0	5000.00
1	5244.35
2	5500.65
3	5769.47
4	6051.43
5	6347.17
6	6657.36
7	6982.72
8	7323.97



13. 12 years

14. 7.1% per year