

Homework

Chapter 1 : Financial mathematics

1A Percentage and money :

1.

20%	25%	25%
75%	50%	25%

2.

\$30	\$50	54kg
24km	54 apples	412.5m
15000 people	7000 cars	\$4377.6

3.

\$200	\$200	\$300
\$200	\$300	\$200

4.

\$500	\$400	\$150
\$800	\$60	\$60

5. 25%

6. 33.33%

7. \$36

8. 210 students

9. \$120

10. \$700

11. \$600

12. 508 kg

1B Percentage increase and decrease

1.

\$165	34.5min	625ml
1.568m	96kg	121.5 watts
\$26300	\$11403	71.045 kg

2.

27.88m	49cm	52.8kg
72in	\$84.5	325.5ml
24.96°C	\$541.2	47.276cm

3.

30%	31.94%	20%
29.05%	115.4%	27.3%

4. \$40

5. 66.7%

6. 37.50%

7.

- a. \$3500
- b. \$4550
- c. The balance didn't return to \$500 because the \$30 increase was applied to the lower balance of \$3500 not the original \$5000.

8.

37.8m	50.7cm	43.5kg
68.8in	\$70.125	259.875ml
20.54°C	\$458	421.761m

9.

30%	25%	20.8%
28.6%	137.5%	30%

10. 260ml

1C Profits and discounts

1.

New Price
\$1275
\$360
\$225
\$195
\$74.49

2.

- i. a. \$3 b. 20%
- ii. a. \$10 b. 33.33%
- iii. a. \$18 b. 20%
- iv. a. \$1000 b. 40%

3.

Percentage Discount
30%
20%
25%
20%
25%

4.

- a. \$874.80
- b. \$637.73

5.

- a. No
- b. The price in December is not the same as the original price because the 15% increase is applied to the discounted price, not the original price.

6.

Final Price
\$492
\$525
\$110
\$595
\$40.375

7.

a. No

b. The price in January is \$600 and the price in February is \$750. The original price is \$800, it's not equal.

8. \$1936

1D Income and taxation

1.

a. \$1634.62

b. Lisa

c. \$67600

2. \$12.80

3. i. a. \$41750 b. 16.5%

ii. a. \$57250 b. 16.1%

iii. a. \$42600 b. 17.4%

iv. a. \$38160 b. 16.3%

4. \$1059.38

5. \$56172.84

6. \$46200

7. \$615

8. \$660

9. \$499.5

10. \$696

11. \$17400

1E Simple interest

1.

a. \$1500

b. \$4200

2. \$24800

3. simple interest : \$6750 amount : \$51750

4. \$6500

5. 0.833year = 10 months

6.

a. \$16800

b. \$350

7.

a. 16.67%

i. 33.33 years

ii. 50 years

8. \$1080

9. simple interest : \$5250 total amount: \$12750

10. earn in 3years : \$480
total amount : \$8480

11. total amount : \$24900
Interest : \$9900

12. 1 year

13. 12.5 years

1F Compound interest

1. \$9733.20

2. \$364651.88

3.

a. \$ 11387.87

b. \$ 17729.46

c. \$ 26764.51

d. \$20158.74

4. \$24864.69

5.

a. \$17777.78

b. \$33256.79

c. \$22388.06

d. \$32877.26

6. \$ 2061823.20

7.

a. \$16927.50

b. 11.29%

8. 6 years

9. \$296048.00

10. \$50679.87

11.

a. \$13723.20

b. 14.27%