

School Name
Mathematics Test 2017

Year 9

Earning Money

Calculator Allowed

Skills and Knowledge Assessed:

- Solve problems involving earning money.

Name _____

Section 1 Short Answer Section

Write all working and answers in the spaces provided on this test paper.

1. Kelly is on an annual salary of \$93 990, paid fortnightly.

What is her gross fortnightly pay?

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2. Andrew is paid an hourly wage of \$48.20, and works a normal week of 38 hours.

What would he be paid for the week's work?

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3. Nora earns a gross wage of \$1260 per week and has 21% deducted for income tax and \$69.60 for medical benefit fees.

What is her net pay?

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4. Lennox works in the packing room of a mail order company. He is paid \$2.50 for each package that he completes.

How much would he earn on a day where he completed 85 packages?

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5. Nina is a real estate agent who is paid a commission of 2% of her sales.

In one month, she had sales of \$512 400. What was her commission?

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6. Nathan is a gardener who is paid an hourly rate of \$45.50 for normal work and an additional payment of \$5.50 per hour when working in wet conditions.

In a week where he worked for 40 hours, he spent 8 hours in wet conditions.

What would he earn for the week?

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7. Callum is a tailor who is paid \$250 per suit jacket and \$120 per suit pants.

How much would he be paid in a week when he made 4 complete suits?

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8. Martin is an author who for one of his novels, received royalties of \$1.40 per copy.
If he pays his agent 14 cents from each copy, how much would he receive from the novel if he sold 125 000 copies?

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9. Mikki is a clerical manager who is paid a gross annual salary of \$78 208, paid weekly.
She has PAYG tax deducted at 18%.
What is her net weekly pay?

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10. Terry is an entertainment manager, and charges a commission of 12% of the earnings of established artists and 8% of the earnings of emerging artists.
In the last month, he arranged \$42 000 in bookings for established artists and \$24 000 for emerging artists.
What did Terry earn in commission last month?

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11. Oprah is paid \$45.20 per hour for a 35 hour week and time and a half for any overtime.
What would she earn in a week where she worked for 43 hours?

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12. Cheryl and Luke both work in a family business, and both are paid weekly.

Cheryl is a carpenter and is paid a wage of \$82.00 per hour.

Luke is a draftsman who is paid \$85.00 per hour for drawing work and \$120.00 per visit for meetings with clients.

What is their combined income in a week when Cheryl worked 40 hours and Luke worked 32 hours and did 3 client visits?



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13. Carol is a salesperson who is paid a retainer of \$435 per week and 5.5% of her sales.

Last week her sales were \$18 750.

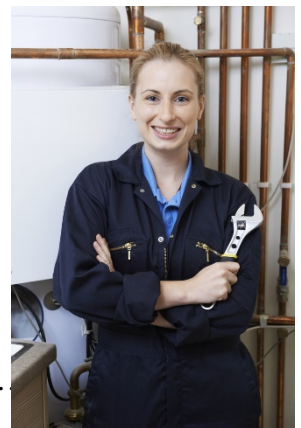
What was her pay last week?

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14. Tammy is a plumber who works in a factory. She is paid \$78.00 per hour for a 35-hour week.

Overtime from Monday to Friday is paid at time and a half and overtime on the weekend at double time.

What does she earn for a week in which she worked 38 hours between Monday and Friday and was called in for 3 hours on Saturday?



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15. Rory is a spare parts salesman. He is paid a commission of 12.5% on the first \$16 000 of his monthly sales and 15% on all sales above this amount.

What is his pay in a month where his sales totalled \$22 500?

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Section 2 Multiple Choice Section

Mark all your answers on the accompanying multiple choice answer sheet, not on this test paper. You may do any working out on this test paper. Calculators are allowed for this section.

1. Des is an accountant who receives her salary as weekly payments of \$2275 before deductions. What is her annual salary?

A. \$27 300 B. \$59 150 C. \$118 300 D. \$136 500

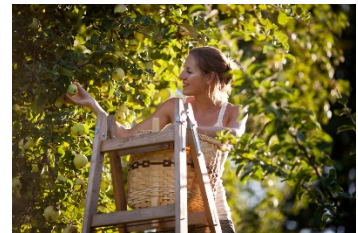
2. Paula is on a wage of \$78.65 per hour for a normal 36-hour week. What is her gross weekly pay?

A. \$2752.75 B. \$2831.40 C. \$2988.70 D. \$3146.00

3. Julia is paid \$10.50 per basket for picking fruit.
What would she be paid for a day where she filled 35 baskets?

A. \$315.00 B. \$ 336.00

C. \$ 346.50 D. \$ 367.50



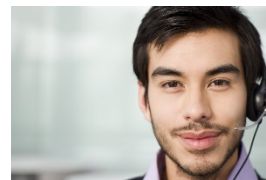
4. Rob is a salesperson who is paid a commission of 6% of his sales.
What would he be paid for a fortnight where his sales were \$42 000?

A. \$2520.00 B. \$2730.00 C. \$2800.00 D. \$7000.00

5. Henrietta recorded a folk album for which she was paid royalties of 40% of sales. The tracks on the album sold for \$1.20 per download and 142 600 tracks were downloaded. What did she receive in royalties?

A. \$20 371 B. \$57 040 C. \$68 448 D. \$171 120

6. Zac is a call-centre worker who is paid an hourly rate of \$48.50. Last week his gross pay was \$1843.00. How many hours did he work last week?



A. 35 B. 36 C. 37 D. 38

7. Genevieve is on a gross annual salary of \$109 200 and is paid weekly. She has 21% of her salary deducted for PAYG tax instalments. How much would she receive in each pay after tax?

A. \$441.00 B. \$1659.00 C. \$2100.00 D. \$ 5200.00

8. Duncan works as a delivery driver. He is paid \$15.20 per parcel he delivers. How many parcels did he deliver in a week where he was paid \$851.20?

A. 56 B. 58 C. 60 D. 62

9. Madalyn sells insurance and is paid a retainer of \$360.00 per fortnight plus a commission of 4.5% of her sales. Last fortnight she sold policies for which the company was paid \$80 400. What was her gross pay for the fortnight?


A. \$3618 B. \$3720 C. \$3978 D. \$17 867

10. Lily is a casual worker who is paid at a rate of \$38.40 per hour for Monday to Friday and time and a half for all weekend work. Her timesheet for a week is shown below.

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Hours	3	5	6	3	4	4	6

What was her gross pay for the week?

A. \$1190.40 B. \$1209.60 C. \$1382.40 D. \$1785.60

11.	<p>Meredith and Adel are on the same hourly wage rate. Last week Meredith was paid \$1965.6 for 36 hours of work.</p> <p>If neither was paid any overtime rates, how much would Adel be paid for working 40 hours?</p> <p>A. \$54.60 B. \$1769.04 C. \$2074.80 D. \$2184.00</p>
12.	<p>Margie works delivering bundles of 15 brochures. She is paid \$26.50 for every 20 bundles of brochures that she delivers.</p> <p>What would she earn in a five-day week where she delivered 2400 brochures per day?</p> <p>A. \$1024.00 B. \$1536.00 C. \$2048.00 D. \$2560.00</p>
13.	<p>Glenda is a nurse who is paid \$41.90 per hour for a 76-hour fortnight, then time and a half for any overtime.</p> <p>How many hours did she work in a fortnight where she was paid \$3687.20?</p> <p>A. 82 hours B. 84 hours C. 86 hours D. 88 hours</p>
14.	<p>Keeva is paid a rate of \$32.00 per hour for a regular 8-hour day, Monday to Friday.</p> <p>She is paid overtime at time and a half for Saturdays and double time for Sundays.</p> <p>What would she earn for a week where she worked her regular hours plus a 4-hour shift on each day of the weekend?</p> <p>A. \$1536.00 B. \$1728.00 C. \$1792.00 D. \$2304.00</p>
15.	<p>Chantel is a physiotherapist who is currently paid a salary of \$118 300.00 p.a. for a 35-hour week.</p> <p>She is offered to change to a wage where she is paid normal rates of pay is \$55.00 /hour for 35 hours plus time and a half for additional hours.</p> <p>How many hours of overtime would she need to work under the new wage to maintain her current weekly pay?</p>  <p>A. 4 B. 5 C. 6 D. 7</p>

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Section 3

Longer Answer Section

Write all working and answers in the spaces provided on this test paper.

Marks

1. Riley is retail manager who is on a wage of \$38.00/hour for a normal 35-hour week. He has deductions from his wage of 19% for PAYG tax, \$35 for union fees and \$126.40 for health fund membership.

a) What is his gross weekly pay for his normal hours?

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b) If he works his normal hours each week, what is his gross annual income?

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c) What is his weekly take home pay?

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d) What is his annual *taxable* income, if his union fees are tax deductible, and he had other deductions worth a total of \$1725.00?

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Marks

- e) Use the table below to calculate the annual income tax that Freya should pay.

2

Taxable income	Tax on this income
0 – \$18,200	Nil
\$18,201 – \$37,000	19c for each \$1 over \$18,200
\$37,001 – \$80,000	\$3,572 plus 32.5c for each \$1 over \$37,000
\$80,001 – \$180,000	\$17,547 plus 37c for each \$1 over \$80,000
\$180,001 and over	\$54,547 plus 45c for each \$1 over \$180,000

(Round answer to nearest dollar.)

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- f) He also has to pay a Medicare levy of 1.5% of his taxable income.
How much is this?

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- g) Work out the amount that Riley is due as a tax refund, or that he must pay as extra tax.

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Multiple Choice Answer Sheet

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Name _____

Completely fill the response oval representing the most correct answer.

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| 1. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
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| 3. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
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| 10. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
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| 13. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 14. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 15. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |

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Short Answer Section

ANSWERS

Question	Working and Answer
1.	$\text{Fortnightly pay} = \$93990 \div 26$ $= \textbf{\$3615}$
2.	$\text{Weeks pay} = 48.20 \times 38$ $= \textbf{\$1 831.60}$
3.	$\text{Tax} = 1260 \times 0.21$ $= \$264.60$ $\text{Net pay} = \$1260 - 69.60 - 264.6$ $= \textbf{\$925.80}$
4.	$\text{Pay} = 2.5 \times 85$ $= \textbf{\$212.50}$
5.	$\text{Commission} = 512400 \times 0.02$ $= \textbf{\$10 248}$
6.	$\text{Pay} = 45.50 \times 40 + 5.50 \times 8$ $= 1820 + 44$ $= \textbf{\$1864}$
7.	$\text{Pay} = (250 + 120) \times 4$ $= \$370 \times 4$ $= \textbf{\$1480}$

Question	Working and Answer
8.	Royalties Martin receives = $\$1.40 - \$0.14 = \$1.26$ per copy Royalties received = 125000×1.26 = \$157 500
9.	Weekly gross pay = $78208 \div 52 = \$1\,504$ Weekly net pay = $0.82 \times 1504 = \mathbf{\$1233.28}$
10.	Commission = $0.12 \times 42000 + 0.08 \times 24000$ = $5040 + 1920$ = \$6960
11.	43 hours = 35 hours normal plus 8 hours at time and a half. Pay = $35 \times 45.20 + 8 \times 45.20 \times 1.5$ = $1582 + 542.4$ = \$2124.40
12.	Cheryl's pay = $82 \times 40 = \$3280$ Luke's pay = $85 \times 32 + 3 \times 120$ = $\$2720 + \360 = $\$3080$ Combined income = $\$3280 + \3080 = \$6360
13.	Commission = $0.055 \times 18750 = \$1031.25$ Pay = $1031.25 + 435 = \mathbf{\$1466.25}$
14.	Normal hours = $\$78 \times 35 = \2730 Overime <i>M</i> to <i>F</i> = $\$78 \times 3 \times 1.5 = \351 Overtime Saturday = $\$78 \times 3 \times 2 = \468 Pay = $2730 + 351 + 468 = \mathbf{\$3549.00}$
15.	Commission = $0.125 \times 16\,000 + 0.15 \times 6500$ = $2000 + 975$ = \$2975.00

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Calculator Allowed
Multiple Choice
Section

ANSWERS

Question	Working	M C Answer
1.	Annual Salary = $2275 \times 52 = \$118\,300$	C
2.	Pay = $\$78.65 \times 36 = \2831.40	B
3.	Pay = $\$10.50 \times 35 = \367.50	D
4.	Commission = $0.06 \times 42000 = \$2520.00$	A
5.	Sales of downloads = $1.2 \times 142\,600$ = $\$171\,120.00$ Royalties = 171120×0.40 = $\$68\,448.00$	C
6.	Hours = $\frac{1843.00}{48.50}$ = 38 hours	D
7.	Gross Weekly pay = $\$109\,200 \div 52$ = $\$2100$ Net fortnightly pay = $\$2100 \times 0.79$ = $\$1659$	B
8.	No Parcels = $\$851.20 \div 15.20$ = 56	A

9.	$\text{Commission} = 0.045 \times 80400$ $= \$3618$ $\text{Pay} = 3618 + 360$ $= \$3978$	C
10.	21 hours normal + 10 hours overtime $\text{Pay} = 21 \times 38.40 + 10 \times 38.40 \times 1.5$ $= \$806.40 + \576.00 $= \$1382.40$	C
11.	$\text{Rate} = 1965.60 \div 36 = \54.60 per hour $\text{Adels Pay} = 54.60 \times 40 = \2184	D
12.	$\text{Number of brochures in week} = 2400 \times 5 = 12000$ $\text{Number of bundles} = 12000 \div 15 = 800$ $\text{Number of sets of 20 bundles} = 800 \div 20 = 40$ $\text{Pay} = 25.60 \times 40 = \1024.00	A
13.	$\text{Pay on regular hours} = 41.90 \times 76 = \3184.40 $\text{Overtime pay} = 3687.20 - 3184.40 = \502.80 If h is overtime hours $41.90 \times 1.5 \times h = 502.80$ $62.85h = 502.80$ $h = 502.80 \div 62.85 = 8$ $\text{Total hours for fortnight} = 76 + 8 = 84 \text{ hours}$	B
14.	$\text{Pay for regular hours} = 32.00 \times 8 \times 5 = \1280 $\text{Pay for Saturday} = 32.00 \times 4 \times 1.5 = \192.00 $\text{Pay for Sunday} = 32.00 \times 4 \times 2 = \256.00 $\text{Pay for week} = 1280 + 192 + 256 = \1728.00	B
15.	$\text{Current weekly pay} = 118300 \div 52 = \2275 $\text{Now wage for normal week} = 35 \times 55 = \1925 $\text{Overtime pay} = 2275 - 1925 = \350 $\text{Overtime Hours} \times 55 \times 1.5 = 350$ $82.5 \times H = 350$ $H = \frac{350}{82.5}$ $= 4.24 \text{ hours overtime}$ $\text{Overtime} \approx = 4 \text{ hours}$	A

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Multiple Choice Answer Sheet

Earning Money

Name _____

Completely fill the response oval representing the most correct answer.

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|-----|---|----------------------------------|---|----------------------------------|---|----------------------------------|---|----------------------------------|
| 1. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input checked="" type="radio"/> | D | <input type="radio"/> |
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| 6. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input checked="" type="radio"/> |
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Calculator Allowed
Longer Answer
Section

ANSWERS

Question	Working and Answer	Marks
1.	(a) $\text{Weekly pay} = 35 \times \$38 = \$1330$	1 mark for correct answer
	(b) $\text{Gross annual income} = 1330 \times 52 = \$69\,160.00$	1 mark for correct answer
	(c) Take home pay = $1330 \times 0.81 - 35 - 126.40$ = $1077.3 - 35 - 126.40$ = $\$915.90$	1 mark for correct answer
	(d) $\text{Annual union fees} = 35 \times 52 = 1820$ $\text{Taxable income} = 69160 - 1820 - 1725$ = $\$65\,615$	1 mark for correct answer
	(e) $\text{Tax on } \$65\,615 = 3572 + 0.325 \times (65615 - 37000)$ = $3572 + 0.325 \times 28615$ = $3572 + 9299.875$ = $\$12\,872$	2 marks for correct answer 1 mark for answer which shows some correct working
	(f) $\text{Medicare levy} = 0.015 \times 65615$ = $\$984.225$ = $\$984$	1 mark for correct answer

Question	Working and Answer	Marks
	(g) $\text{Income Tax Paid} = 69160 \times 0.19 = \13140.40 $\text{Total Tax Due} = 12872 + 984 = \13856 $\text{Tax Bill} = \$13856 - \13140.40 $\text{Tax Bill} = \$715.60$	2 marks for correct answer 1 mark for answer which shows some correct working