

High School Mathematics Test 2014

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. Jodie is paid \$1 258.40 per fortnight. What is her annual salary?
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.....
2. Keisha is paid a wage of \$14.35 per hour for a 40 hour working week. What is her weekly pay?
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.....
3. Luke is a telemarketer and is paid \$2.25 for each call. On Monday she made 25 calls in the morning and another 34 calls in the afternoon. How much did she earn on Monday?
.....
.....
4. Mitch is a real estate salesman who is paid a commission of 2% of his sales. He sold a house valued at \$520 000 last week. How much commission was he paid for the sale of the house?
.....
.....
5. Nicole has a normal weekly pay of \$560.00. She takes 4 weeks annual leave and receives her pay in advance plus a 17½% leave loading. How much pay would she receive, before deductions?
.....
.....

6. Oscar is paid a gross weekly salary of \$1 283.

He has provided his TFN, so he is entitled to the tax free threshold.

Use the table at right to work out his net weekly pay.

WEEKLY TAX TABLE – INCORPORATING MEDICARE LEVY

Weekly earnings	Amount to be withheld	
	With tax-free threshold	No tax-free threshold
	1 \$	2 \$
1276.00	272.00	395.00
1277.00	273.00	396.00
1278.00	273.00	396.00
1279.00	273.00	397.00
1280.00	274.00	397.00
1281.00	274.00	397.00
1282.00	274.00	398.00
1283.00	275.00	398.00
1284.00	275.00	399.00
1285.00	275.00	399.00
1286.00	276.00	399.00
1287.00	276.00	400.00
1288.00	276.00	400.00
1289.00	277.00	400.00
1290.00	277.00	401.00

7. Peter picks apples at an orchard and is paid \$9.80 per 5 kg bag that he fills. In one week he picked 420 kg of apples. What was he paid for the week?

8. A travel agency pays its salespeople a retainer of \$400 per week plus a commission of 3.5% of the value of the packages that they sell. Ray is a salesman who last week sold travel packages worth \$48 320.00. What was his pay for the week?

9. Ursula worked 12 hours overtime last week for which she was paid at time and a half. Her normal hourly rate was \$26.50. What is her gross pay for the overtime?

10. Vince's normal hour wage is \$32.40 per hour for a forty hour week, with overtime at time and a half. What would Vince earn for a week where he worked 46 hours?

-
11. Terry and Suzie both work a thirty five hour week and are paid weekly. Terry is paid a wage of \$45.60 per hour and Suzie is on an annual salary of \$84 240.00. Who gets the higher weekly pay, and by how much?
-
-
-
-
12. Tim works for a plumbing company which pays him a normal rate of \$54.00/hour for a 36 hour week with overtime at time and a half during the working week and double time at weekends. Last week Tim worked 8 hours each day from Monday to Friday and then worked 3 hours on Saturday and 2 hours on Sunday. What was he paid for the week?
-
-
-
-
-
13. Annis works in a factory where she paints figurines. She is paid \$65.40 for every 5 figurines that she paints. How many figurines did she paint last week if she was paid \$981.00?
-
-
-
14. Jeff is a writer who is paid an advance on his royalties of \$60 000 for a new novel. When the novel is published he will receive royalties of 7% of the sales. If the novel sells 45 950 copies at \$28.00 each, how much extra will Jeff receive after the advance?
-
-
-
-
15. Chloe works in sales and is paid a retainer of \$650 per week plus 5% of her sales. Last week she was paid \$1 390. What was the value of her sales last week?
-
-
-
-

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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. Liam is on a salary, and receives \$1 400.00 gross per week. What is his annual salary?
A. \$16 800.00 B. \$36 400.00 C. \$72 800.00 D. \$80 000.00
2. Sarah is paid an hourly rate of \$50.80. What would she earn in a week in which she works 40 hours?
A. \$1 016.00 B. \$2 032.00 C. \$2 332.80 D. \$2 652.00
3. Emma sews shirts in a factory where she is paid \$4.50 per shirt that she sews. What would she be paid for a week where she sews 220 shirts?
A. \$990.00 B. \$1 100.00 C. \$1 200.00 D. \$1 500.00
4. Josh is a car salesman who is paid a commission of 6% of his sales. Last week his sales were \$42 000. What was his gross pay?
A. \$1 042.00 B. \$1 260.00 C. \$1 890.00 D. \$2 520.00
5. Taylor writes a song and is paid royalties of \$0.16 per sale of the song. The song had sales of 65 000 units, including downloads and CD sales. How much would Taylor be paid in royalties?
A. \$10 400 B. \$14 000 C. \$50 200 D. \$104 000
6. Courtney is on a salary of \$92 456 p.a. and is paid fortnightly. How much would she receive in each pay?
A. \$1 778.00 B. \$3 556.00 C. \$7 112.00 D. \$7704.67
7. Shaun is an electrician who is paid an hourly rate of \$64.80. Last week his gross pay was \$2 332.80. How many hours did he work last week?
A. 35 hours B. 35 ½ hours C. 36 hours D. 36 ½ hours

8.	Lachlan works from home, taking calls for an insurance company. He is paid \$4.40 per call that he takes. How many calls did he take in a day where he earned \$154.00? A. 29 calls. B. 31 calls. C. 33 calls. D. 35 calls.
9.	Caleb is an advertising salesman who is paid a retainer of \$250.00 per week plus a commission of 3.5% of his sales. Last week his sales were \$55 000. What was his gross pay? A. \$1 925.00 B. \$1 933.75 C. \$2 175.00 D. \$2 500.00
10.	Gemma is paid at normal rates of \$36.50 per hour. In one week she was paid for 35 hours at normal rates and 6 hours overtime at time and a half. What was her gross pay for the week? A. \$1 496.50 B. \$1 606.00 C. \$1 715.50 D. \$2 244.75
11.	Sam is paid \$1 026.00 for 36 hours of work. How many hours has he worked, at the same rate, if he is paid \$741.00? A. 23 hours B. 24 hours C. 25 hours D. 26 hours
12.	Yallingup Electrical pays Isaac normal rates of \$32.00 /hour for a 36 hour week and time and a half for overtime. Last week Isaac's gross pay was \$1 536. How many hours did he work last week? A. 44 B. 46 C. 48 D. 50
13.	Andres is paid a regular hourly rate is \$40.50/hour. His regular hours are 8 hours per day for a nine day fortnight. He receives an additional driving allowance of \$4.10/hour when he has to drive his boss to appointments. Last fortnight he worked his regular hours and spent 6½ hours of that time driving his boss. What was his pay for last fortnight? A. \$1 646.65 B. \$2 916.00 C. \$2 942.65 D. \$3 179.25
14.	Brooke collates surveys for a research company and is paid \$85 per pack of 50 surveys that she collates. Last week she was sent 3 boxes each of which held 12 packs of 50 surveys. If she collated all of the surveys that she was sent, how much did she earn for the week? A. \$1 020 B. \$3 060 C. \$4 250 D. \$12 750
15.	Maura is paid a retainer of \$640 per week plus a commission of 5% of her sales. Last week her gross pay including commission was \$1 840.00. What were her sales last week? A. \$24 000 B. \$26 000 C. \$27 500 D. \$36 800

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Section 3 Longer Answer Section

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

Marks

1. Monika is a salaried teacher who has a gross fortnightly pay of \$3 600 from which she has 22% deducted for PAYG tax. She also has deductions of \$55 for union fees, and \$68.40 for health fund membership.

a) What is her gross annual salary?

1

.....
.....

b) What is her fortnightly take home pay?

1

.....
.....

c) What is her annual *taxable* income, if her union fees are tax deductible, and he had other deductions worth a total of \$1 240.00?

1

.....
.....

Marks

d) Use the table below to calculate the annual income tax that Monika 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

e) She also has to pay a Medicare levy of 1.5% of her taxable income. How much is this?

1

f) Work out the amount that Monika is due as a tax refund, or that she must pay as extra tax.

2

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Multiple Choice Answer Sheet

Name _____

Completely fill the response oval representing the most correct answer.

- | | | | | | | | | |
|-----|---|-----------------------|---|-----------------------|---|-----------------------|---|-----------------------|
| 1. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 2. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 3. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 4. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 5. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 6. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 7. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 8. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 9. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 10. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 11. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 12. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 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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ANSWERS

Section 1 (1 mark each)	
	Working and Answers
1.	$\begin{aligned}\text{Annual Salary} &= 1258.40 \times 26 \\ &= \$32\,718.40\end{aligned}$
2.	$\begin{aligned}\text{Pay} &= 14.35 \times 40 \\ &= \$574\end{aligned}$
3.	$\begin{aligned}\text{Number of calls} &= 25 + 34 \\ &= 59 \\ \text{Pay} &= 59 \times 2.25 \\ &= \$132.75\end{aligned}$
4.	$\begin{aligned}\text{Commission} &= 2\% \text{ of } 520000 \\ &= 0.02 \times 520000 \\ &= \$10\,400\end{aligned}$
5.	$\begin{aligned}\text{Pay for leave} &= 4 \times 560.00 \times 1.175 \\ &= \$2\,632\end{aligned}$
6.	$\begin{aligned}\text{From table deduction} &= 275 \\ \text{Net Pay} &= 1283 - 275 \\ &= \$1\,008.00\end{aligned}$
7.	$\begin{aligned}\text{Number of bags} &= 420 \div 5 \\ &= 84 \\ \text{Pay} &= 84 \times 9.80 \\ &= \$823.20\end{aligned}$
8.	$\begin{aligned}\text{Commission} &= 3.5\% \text{ of } 48320 \\ &= 0.035 \times 48320 \\ &= \$1\,691.20 \\ \text{Pay} &= 1691.2 + 400 \\ &= \$2\,091.20\end{aligned}$
9.	$\begin{aligned}12 \text{ hours at time and a half} &= 12 \times 1.5 \text{ hours at normal rate.} \\ &= 18 \text{ hours normal} \\ \text{Pay for overtime} &= 18 \times 26.50 \\ &= \$477.00\end{aligned}$

10.	Hours = 40 hours at normal rate plus 6 hours at time and a half $= 40 + 6 \times 1.5$ = 49 hours at normal rate Pay = 49×32.40 = \$1 587.60
11.	Terry's weekly pay = 45.60×35 = \$1 596 Suzie's weekly pay = $84240 \div 52$ = \$1 620 Suzie's is higher by = $1620 - 1596$ = \$24
12.	He worked $5 \times 8 = 40$ hours <i>M to F</i> plus 5 hours on weekend Hours = 36 hours at normal plus 4 hours at time and a half plus 5 hrs at double $= 36 + 6 + 10$ hours at normal = 52 hours at normal rate. Pay = 52×54.00 = \$2 808.00
13.	Number of groups of 5 = $\frac{981}{65.40}$ = 15 Number of figurines = 15×5 = 75
14.	Sales of Novel = 45950×28 = \$1 286 600 Royalties = 7% of 1286600 = \$90 062 Amount still to receive = $90062 - 60000$ = \$30 062
15.	Pay = 650 + commission Commission = $1390 - 650$ = \$740 Commission = 5% of sales $740 = 0.05 \times \text{sales}$ Sales = $\frac{740}{0.05}$ = \$14 800.

Section 2 (1 mark each)		
	Working	Answers
1.	Salary = 1400×52 = \$72 800	C
2.	Pay = 50.80×40 = \$2032	B
3.	Pay = 4.50×220 = \$990	A
4.	Pay = 0.06×42000 = \$2 520	D
5.	Pay = 0.16×65000 = \$10 400	A
6.	Pay = $92456 \div 26$ = \$3 556	B
7.	Hours = $2332.8 \div 64.8$ = 36 hrs	C
8.	Number of calls = $154 \div 4.40$ = 35 calls	D
9.	Pay = $55000 \times .035 + 250$ = \$2 175.00	C
10.	6 hours overtime at time and a half = 9 hours at normal rates Pay = $36.5 \times (35 + 9)$ = 36.5×44 = \$1 606.00	B
11.	Hourly rate = $1026 \div 36$ = \$28.50 / hr Hours = $741 \div 28.5$ = 26 hours	D
12.	Total hours paid for = $1536 \div 32$ = 48 hours 36 hours at normal rates leaves 12 hours paid as overtime. 12 hours normal = $12 \div 1.5 = 8$ hours time and a half Total hours worked = $36 + 8$ = 44 hours	A
13.	Regular hours = $8 \times 9 = 72$ hours Pay = $72 \times 40.50 + 6.5 \times 4.10$ = $2916 + 26.65$ = \$2 942.65	C
14.	Number received = $3 \times 12 = 36$ packs of fifty. Pay = 36×85 = \$3 060.00	B
15.	Total pay = 1840 640 + commission = 1840 commission = 1200 $0.05 \times \text{sales} = 1200$ $\text{sales} = \frac{1200}{0.05}$ = \$24 000	A

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Section 3	
1.	a) Gross annual salary = 3600×26 = \$93 600.00
	b) Fortnightly take home = $3600 \times 0.78 - 55.00 - 68.40$ = $2808 - 55 - 68.4$ = \$2 684.60
	c) Annual Taxable income = $3600 \times 26 - 55 \times 26 - 1240$ = \$90 930
	d) Income tax on \$90 930 = $(90930 - 80000) \times 0.37 + \17547 = $4044.1 + 17547$ = \$21 591.10
	e) Medicare = 0.015×90930 = \$1 363.95
	f) <i>PAYG</i> deducted = $3600 \times 0.22 \times 26$ = \$20 592.00 Total Tax due = $21591.1 + 1363.95$ = \$22 955.05 Tax Owing = $22955.05 - 20592$ = \$2 363.05

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Multiple Choice Answer Sheet

Name Marking Sheet

Completely fill the response oval representing the most correct answer.

- | | | | | | | | | |
|-----|---|----------------------------------|---|----------------------------------|---|----------------------------------|---|----------------------------------|
| 1. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input checked="" type="radio"/> | D | <input type="radio"/> |
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| 15. | A | <input checked="" type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |