

High School Mathematics Test 2015

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. Toni is on an annual salary of \$23 842, paid weekly.

What is her gross weekly pay?

.....
.....

2. Jack is paid an hourly wage of \$34.50, and works a normal week of 36 hours.

What would he be paid for the weeks work?

.....
.....

3. Olivia earns a gross wage of \$745.50 per week and has 14% deducted for income tax and \$34.60 for medical benefit fees.

What is her net pay?

.....
.....

4. Lee is paid for driving a truck at a rate of \$0.85 per kilometre.

How much would he be paid for a trip of 1 250 km?

.....
.....



5. Marnie is a cosmetics salesperson who is paid a commission of 26% of her sales.
In one week she had sales of \$2 400. What was her commission?

.....

.....

6. Sven is a plumber who is paid an hourly rate of \$56.50 for normal work and an additional payment of \$6.20 per hour when working in muddy conditions.
In a week where he worked for 38 hours, he spend 6.5 hours in muddy conditions.
What would he earn for the week?

.....

.....

7. Leo packs plates and bowls into boxes for a pottery. He is paid \$3.50 for each box that he packs.
The plates are boxes in lots of 6 and the bowls in lots of 8.
How much would he earn on a day where he packed 240 plates and 240 bowls?

.....

.....

8. A band called The Screenplay sold 156 000 copies of a song for which they received royalties of 40 cents per copy.
If there are 3 members in the band, how much would each receive from the song?

.....

.....



9. Anna is a counsellor who is paid a gross annual salary of \$65 364, paid fortnightly.
She has PAYG tax deducted at 15%.
What is her net fortnightly pay?

.....

.....

10. Saskia is an entertainment manager, and charges a commission of 24% of the earnings of a band and 28% of the earnings of an individual artist.

At the moment she has two clients, a band who last year earned \$290 000 and a singer who earned \$242 000.

What did Saskia earn in commission last year?

.....

.....

11. Dara is paid \$30.50 per hour for a 36 hour week and time and a half for any overtime.

What would she earn in a week where she worked for 42 hours?

.....

.....

12. Nick and Tania both work for the same company and are both paid weekly.

Tania is a clerical assistant and is paid a wage of \$50.60 per hour for a 35 hour week.

Nick is a home nurse who is paid \$45.60 per visit for 8 visits per day in a 5 day week.

Who gets the higher weekly pay, and by how much?

.....

.....

.....



13. Louis is a salesperson who is paid a retainer of \$350 per week and 1.2% of his sales.

Last week his sales were \$25 600.

What was his pay last week?

.....

.....

14. Jonathan is a gym instructor who is paid \$45.00 per hour for a 36 hour week with overtime from Monday to Friday at time and a half and overtime on the weekend at double time.

What does he earn for a week in which he worked 40 hours between Monday and Friday inclusive plus 6 hours on Sunday?



.....

.....

.....

15. Frida is paid a commission of 15% on the first \$2 000 of her sales and 8% on all sales above this amount.

What would she be paid if her sales totalled \$5 500?

.....

.....

.....

High School Mathematics Test 2015

Calculator Allowed

Year 9

Earning Money

Name _____

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. Zoe is a teacher who receives her salary as fortnightly payments of \$3 076 before deductions. What is her annual salary?

A. \$73 824 B. \$79 976 C. \$82 400 D. \$159 952

2. Yasmin is on a wage of \$54.80 per hour for a normal 40 hour week. What is her gross weekly pay?

A. \$1 080.00 B. \$2 160.00 C. \$2 192.00 D. \$2 301.60

3. Josh is paid \$14 per room to clean carpets. What would he be paid for a day where he cleaned 16 rooms?

A. \$224 B. \$242
C. \$256 D. \$284




4. Elise is a salesperson who is paid a commission of 2.5% of her sales. What would she be paid for a week where her sales were \$26 000?

A. \$104.00 B. \$260.00 C. \$520.00 D. \$650.00

5. Mia wrote a book of short stories for which she was paid royalties of 7% of sales. The book sold for \$28.00 per copy and sold 12 500 copies. What did she receive in royalties?

A. \$3 500 B. \$12 500 C. \$24 500 D. \$87 500

6.	<p>Fletcher is a tradesman who is paid an hourly rate of \$72.60.</p> <p>Last week his gross pay was \$ 2 758.80.</p> <p>How many hours did he work last week?</p> <p>A. 35 B. 36 C. 37 D. 38</p>	
7.	<p>Bethany is on a gross annual salary of \$92 040 and is paid fortnightly. She has 22% of her salary deducted for PAYG tax instalments.</p> <p>How much would she receive in each pay after tax?</p> <p>A. \$2 761.20 B. \$3 095.90 C. \$ 3 518.00 D. \$ 5 522.40</p>	
8.	<p>Xavier works as a hairdresser. He is paid \$12.40 per customer he attends. How many customers did he have in a day where he earned \$310.00?</p> <p>A. 25 B. 26 C. 28 D. 30</p>	
9.	<p>Declan is a car salesman who is paid a retainer of \$460.00 per week plus a commission of 2.5% of his sales. Last week his sales were \$105 400. What was his gross pay?</p> <p>A. \$2 635 B. \$2 175 C. \$3 095 D. \$3 555</p>	
10.	<p>Natasha is paid at normal rates of \$28.50 per hour for a normal week of 36 hours and any overtime is paid at time and a half. What was her gross pay for a week where she worked 45 hours?</p> <p>A. \$1 026.00 B. \$1 282.50 C. \$1 375.45 D. \$1 410.75</p>	
11.	<p>Sophie and Max are on the same wage rate. Last week Sophie was paid \$2 618 for 35 hours of work. How many hours did Max work, if he was paid \$2 842.40.</p> <p>A. 36 hours B. 38 hours C. 40 hours D. 42 hours</p>	
12.	<p>Willow works entering data for a research company. She is paid \$18.50 for every box of 20 forms that she enters.</p> <p>What would she earn in a five day week where she completed an average of 540 forms per day?</p> <p>A. \$499.50 B. \$2 497.50 C. \$3 746.25 D. \$4 995.00</p>	

13. Harley is a salesperson who is paid a commission of 5% on sales up to \$10 000 and 8% on sales above that amount.

What were his sales in a week where he earned a commission of \$1 140?

A. \$8 000 B. \$14 250 C. \$18 000 D. \$22 800

14. Gabriel is paid a rate of \$62.00 per hour for a regular 8 hour day. He is paid overtime at time and a half for the first 2 hours of overtime on each day and then double time after that.

What would he earn for a five day week where he worked 12 hours per day?

A. \$3 720 B. \$4 650 C. \$5 580 D. \$7 440

15. Tori is an IT consultant whose normal rates of pay is \$48.00 /hour for a normal 35 hour week with overtime at time and a half. Last week Tori's gross pay was \$2 112. How many hours did she work last week?

A. 41 B. 42
C. 43 D. 44



High School Mathematics Test 2015

Year 9

Earning Money

Calculator Allowed

Name _____

Section 3

Longer Answer Section

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

Marks

1. Freya is manager who is on a wage of \$68.00/hour for a normal 36 hour week. She has deductions from her wage of 28% for PAYG tax, \$48 for union fees and \$56.40 for health fund membership.

- a) What is her gross weekly pay for her normal hours?

1

.....
.....

- b) If she works her normal hours each week, what is her gross annual income?

1

.....
.....

- c) What is her weekly take home pay?

1

.....
.....

- d) What is her annual *taxable* income, if her union fees are tax deductible, and she had other deductions worth a total of \$2 300.00?

2

.....
.....

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

- f) She also has to pay a Medicare levy of 2% of her taxable income. How much is this?

1

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

2

High School Mathematics Test 2015

Multiple Choice Answer Sheet

Earning Money

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"/> |

High School Mathematics Test 2015

Year 9

Earning Money

Non Calculator

Section 1 Short Answer Section

ANSWERS

No.	WORKING	ANSWER
1.	Weekly pay = $\$23842 \div 52$ = \$458.50	\$458.50
2.	Weeks pay = 34.50×36 = \$1 242.00	\$1 242.00
3.	Tax = 745.50×0.14 = \$104.37 Net pay = $\$745.50 - 34.60 - 104.37$ = \$606.53	\$606.53
4.	Pay = 1250×0.85 = \$1 062.50	\$1 062.50
5.	Commission = 2400×0.26 = \$624.00	\$624.00
6.	Pay = $56.50 \times 38 + 6.20 \times 6.5$ = 2147 + 40.30 = \$2 187.30	\$2 187.30
7.	240 plates = $\frac{240}{6} = 40$ boxes 240 bowls = $\frac{240}{8} = 30$ boxes Pay = $(40 + 30) \times 3.50$ = \$245.00	\$245.00
8.	Royalties = $156000 \times 0.40 = \$62\ 400$ Amount each member receives = $62400 \div 3 = \$20\ 800$	\$20 800
9.	Fortinghtly gross pay = $\frac{65364}{26} = \$2\ 514$ Fortnightly net pay = $0.85 \times 2514 = \$2\ 136.90$	\$2 136.90
10.	Commission = $0.24 \times 290000 + 0.28 \times 242000$ = 69600 + 67760 = \$137 360.00	\$137 360

11.	42 hours = 36 hours normal plus 6 hours at time and a half. Pay = $36 \times 30.50 + 6 \times 30.50 \times 1.5$ = $1098 + 274.5$ = \$1 372.50	\$1 372.50
12.	Tania's pay = $50.60 \times 35 = \$1\,771.00$ Nick's pay = $45.60 \times 8 \times 5 = \$1\,824.00$ Nick earns more by $1824 - 1771 = \$53$	Tania earns \$53 more
13.	Commission = $0.012 \times 25600 = \$307.20$ Pay = $307.20 + 350 = \$657.20$	\$657.20
14.	Normal hours = $45 \times 36 = \$1\,620$ Overtime <i>M to F</i> = $4 \times 45 \times 1.5 = \270 Overtime Sunday = $6 \times 45 \times 2 = \$540$ Pay = $1620 + 270 + 540 = \$2\,430.00$	\$2 430
15.	Commission = $0.15 \times 2000 + 0.08 \times 3500$ = $300 + 280$ = \$580.00	\$580

High School Mathematics Test 2015

Year 9

Earning Money

Calculator Allowed

Section 2 Multiple Choice Section

ANSWERS

No.	WORKING	ANSWER
1.	Annual Salary = $3076 \times 26 = \$79\,976$	B
2.	Pay = $54.8 \times 40 = \$2\,192.00$	C
3.	Pay = $\$14 \times 16 = \224	A
4.	Commission = $0.025 \times 26000 = \$650.00$	D
5.	Sales of book = $28 \times 12\,500$ = $\$350\,000$ Royalties = $350\,000 \times 0.07$ = $\$24\,500$	C
6.	Hours = $\frac{2758.8}{72.6}$ = 38 hours	D
7.	Gross Fortnightly pay = $92040 \div 26$ = $\$3540$ Net fortnightly pay = $\$3540 \times 0.78$ = $\$2\,761.20$	A
8.	No Customers = $310 \div 12.40$ = 25	A
9.	Commission = 0.025×105400 = $\$2635$ Pay = $2635 + 460$ = $\$3\,095$	C
10.	45 hours = 36 hours normal + 9 hours overtime Pay = $36 \times 28.50 + 9 \times 28.50 \times 1.5$ = $1026.00 + 384.75$ = $\$1\,410.75$	D
11.	Rate = $2618 \div 35 = \$74.80$ per hour Max hours = $2842.40 \div 74.80 = 38$ hours	B

12.	$\begin{aligned} \text{Number of forms in week} &= 540 \times 5 = 2700 \\ \text{Number of boxes} &= 2700 \div 20 = 135 \\ \text{Pay} &= 18.50 \times 135 = \$2\,497.50 \end{aligned}$	B
13.	$\begin{aligned} \text{Commission on first } \$10\,000 &= 0.05 \times 10000 = \$500 \\ \text{Commission on remainder} &= 1140 - 500 = 640 \\ 0.08 \times \text{Additional sales} &= 640 \\ \text{Additional sales} &= \frac{640}{0.08} = 8000 \\ \text{Total sales} &= 8\,000 + 10\,000 \\ &= \$18\,000 \end{aligned}$	C
14.	$\begin{aligned} \text{A 12 hour day} &= 8 \text{ hours at normal rates, } 2 \text{ hours at } \times 1\frac{1}{2} \text{ and } 2 \text{ hours at } \times 2 \\ &= 8 + 3 + 4 = 15 \text{ hours pay per day} \\ \text{For 5 days pay} &= 5 \times 15 \times 62 \\ &= \$4\,650 \end{aligned}$	B
15.	$\begin{aligned} \text{Pay for normal week} &= 35 \times 48 = \$1\,680 \\ \text{Overtime pay} &= 2112 - 1680 = \$432 \\ \text{Hours} \times 48 \times 1.5 &= 432 \\ 72 \times H &= 432 \\ H &= \frac{432}{72} \\ &= 6 \text{ hours overtime} \\ \text{Hours worked} &= 35 + 6 = 41 \text{ hours} \end{aligned}$	A

High School Mathematics Test 2015

Multiple Choice Answer Sheet

Earning Money

Name ANSWERS

Completely fill the response oval representing the most correct answer.

- | | | | | | | | | |
|-----|---|----------------------------------|---|----------------------------------|---|----------------------------------|---|----------------------------------|
| 1. | A | <input type="radio"/> | B | <input checked="" type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 2. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input checked="" type="radio"/> | D | <input type="radio"/> |
| 3. | A | <input checked="" 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 checked="" type="radio"/> |
| 5. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input checked="" type="radio"/> | D | <input type="radio"/> |
| 6. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input checked="" type="radio"/> |
| 7. | A | <input checked="" type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 8. | A | <input checked="" 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 checked="" type="radio"/> | D | <input type="radio"/> |
| 10. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input checked="" type="radio"/> |
| 11. | A | <input type="radio"/> | B | <input checked="" type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 12. | A | <input type="radio"/> | B | <input checked="" type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 13. | A | <input type="radio"/> | B | <input type="radio"/> | C | <input checked="" type="radio"/> | D | <input type="radio"/> |
| 14. | A | <input type="radio"/> | B | <input checked="" type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |
| 15. | A | <input checked="" type="radio"/> | B | <input type="radio"/> | C | <input type="radio"/> | D | <input type="radio"/> |

High School Mathematics Test 2015

Year 9

Earning Money

Calculator Allowed

Section 3

Longer Answer Section

ANSWERS

Marks

1.

(a) Weekly pay = $36 \times \$68 = \$2\,448$

**1 mark for
correct answer**

(b) Gross annual income = $2448 \times 52 = \$127\,296.00$

**1 mark for
correct answer**

(c) Take home pay = $2448 \times 0.72 - 48 - 56.40$
 $= 1762.56 - 48 - 56.40$
 $= \$1\,658.16$

**1 mark for
correct answer**

(d) Annual union fees = $48 \times 52 = 2496$
Taxable income = $127296 - 2496 - 2300$
 $= \$122\,500$

**1 mark for
correct answer**

(e) Tax on \$122 500 = $17547 + 0.37 \times (122500 - 80000)$
 $= 17547 + 0.37 \times 42500$
 $= 17547 + 15725$
 $= \$33\,272$

**2 marks for
correct answer**

**1 mark for
answer which
shows some
correct working**

(f) Medicare levy = 0.02×122500
 $= \$2\,450$

**1 mark for
correct answer**

(g)

$$\text{Income Tax Paid} = 2448 \times 0.28 \times 52 = \$35\,642.88$$

$$\text{Total Tax Due} = 33272 + 2450 = \$35\,722$$

$$\begin{aligned}\text{Tax Bill} &= \$35\,722.00 - \$35\,642.88 \\ &= \$79.12\end{aligned}$$

**2 marks for
correct answer****1 mark for
answer which
shows some
correct working**