PRACTICE REGULAR ASSESSMENT

KS3 Math Grade 8

Candidate Vietnamese name: .....

Candidate English name: .....

School:..... Class:.....

Date:.....

Instructions

- The test is **20 minutes** long **+ 10 minutes** with your review booklet.
- You will need a **black** ink or ball-point pen, pencil and rubber (eraser).
- Try to answer **all** the questions.
- Calculators **are allowed**
- Write any calculations or working on the question paper.
- Check your work carefully.
- Raise your hand if you have a question.
- Cheating will result in failure.

Total Score: /34

LIVEWORKSHEETS

Percentage Change

1) Emma buys a house for $201,500. She sells the house for $ 213,590. Calculate the **percentage profit** Emma makes. **(1 mark)**

2) Last year Geri's council tax bill was **$1,906**. This year she has to pay **$1,815** for her council tax. Work out the **percentage decrease** in her council tax bill. *Give your answer to 1 decimal place.*

(1 mark)

3) A business has increased in value by 10% to $489,500. What was the business worth **before the increase?** **(1 mark)**

Simple Interest

$$I = P \times r \times t \quad ; \quad A = P + I$$

4) Jaxon invests $3,000 in a bank account that pays 2% simple interest per year. He invests the money for 3 years. Calculate the **amount of interest Jaxon earns.**

(1 mark)

5) A bank is offering 1.5% simple interest on a savings account. If you deposit $7000, how much **interest will you earn in 17 months?** Correct to 2 decimal places

(1 mark)

6) Laura invests $2,400 in an account that pays 1.2% simple interest per annum. She invests the money for 5 years. At the end of each year Laura gives the interest to her two sisters, Hannah and Freya in the **ratio 3:7.** How much money does Freya receive in total? **(2 marks)**

7) Faith invests **$800 for 3 years** in a bank account. The account pays simple interest at a rate of **0.4% per year**. Work out the **total amount of money** in Faith's bank account **after 3 years.**

LIVEWORKSHEETS

$(1\ mark)$

Probability

Elizabeth has a bunch of red, yellow and white roses. She chooses a rose at random. The probability that she chooses a **yellow rose is 0.1**. The probability that she chooses a **white rose is 0.2.**

8) What is the probability that Elizabeth chooses a rose that is either **yellow or white?**

$(1\ mark)$

9) What is the probability that Elizabeth chooses a **red rose**? *Use a complement.*

$(1\ mark)$

10) There were ten roses in the bunch originally. **How many roses were red?**

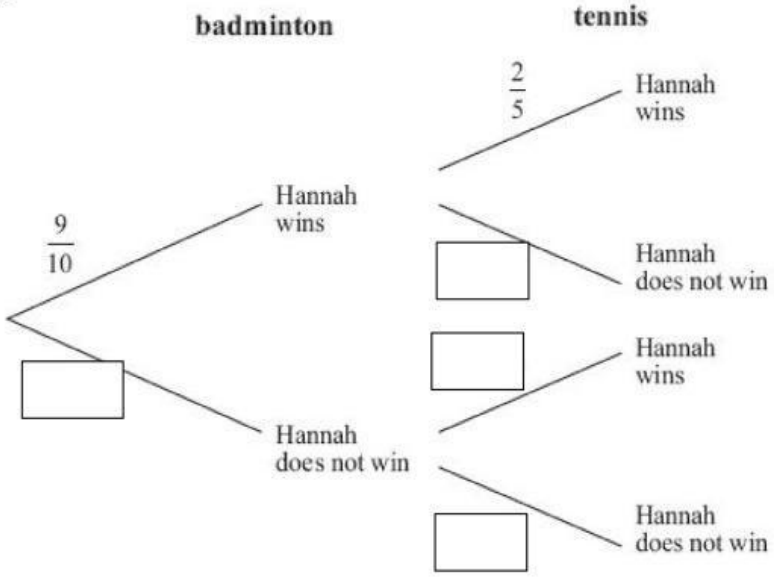
$(1\ mark)$

11) Hannah is going to play one badminton match and one tennis match. The probability that she will **win the badminton match is 9/10**. The probability that she will **win the tennis match is 2/5.**

a) Complete the probability tree diagram.

b) Work out the probability that Hannah will win **BOTH** matches.

c) Work out the probability that Hannah wins **ATLEAST one match**.



LIVEWORKSHEETS

Averages

12) Complete the table. **(3 marks)**

Data	Mean	Median	Range
1 , 2 , 4 , 5 , 6 , 6			
2 , 1 , 1 , 7 , 4 , 9 , 12 , 26 , 10			
21 , 2 , 7 , 9 , 1 , 2			

(3 *marks*)

Charts & Diagrams

13) This is information on how Marty spends his time in the garden.

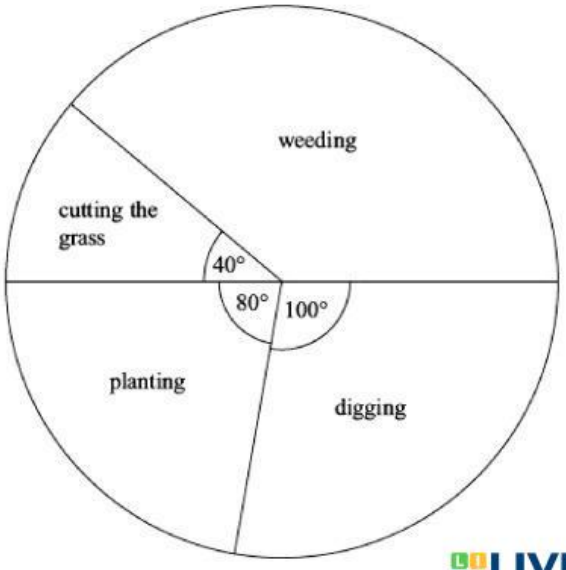
Activity	Time (Mins)	Angle
Weeding	**a**	**b**
Cutting the grass	20	40°
Planting	**c**	80°
Digging	**d**	100°

What is the value of **a?**

What is the value of **b?**

What is the value of **c?**

What is the value of **d?**



LIVEWORKSHEETS

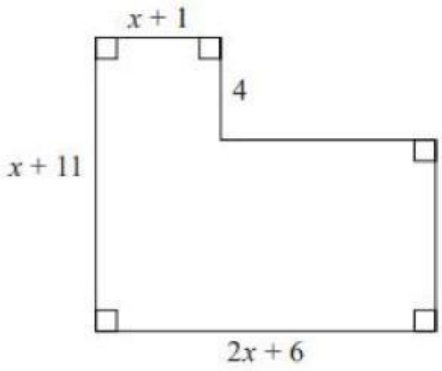
Expressions & Equations

(2 marks)

14) Fully factorise: $28x^3 + 84x^2$

(2 marks)

15) The **area of the shape is *A* cm²**
Show that **A = 2x² + 24x + 46**



(2 marks)

16) Solve the systems of linear equations:

By Substitution:	By Elimination:
3x + 4y = 92 y = 7x - 132	3x + 9y = 63 3x + 4y = 43

(4 marks)

17) Expand and simplify: 3x(11 + 4) - 9x (2-6)

(1 marks)

LIVEWORKSHEETS

Linear Equations

18)

A) Draw the line: y = 4x - 1

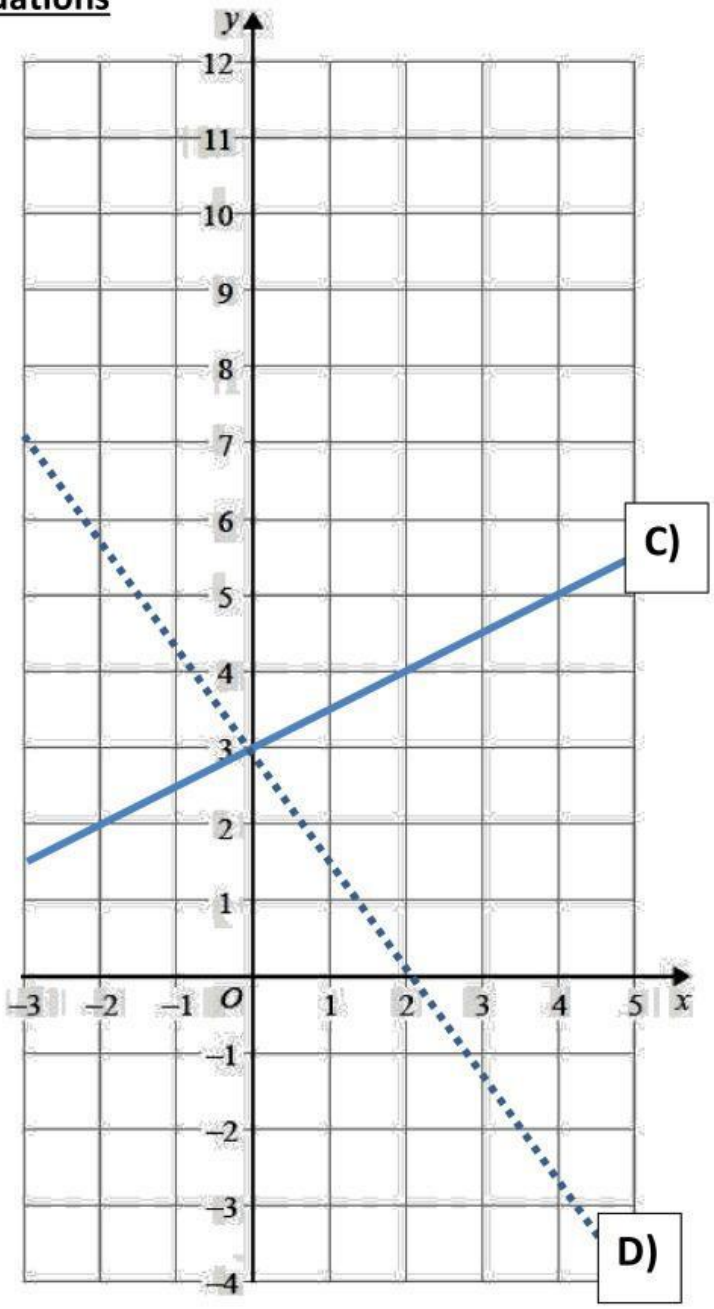
B) Draw the line: 3y = 15 - x

C) Determine the equation of line C:

_____

D) Determine the solution of lines C and D:

_____



(4 marks)

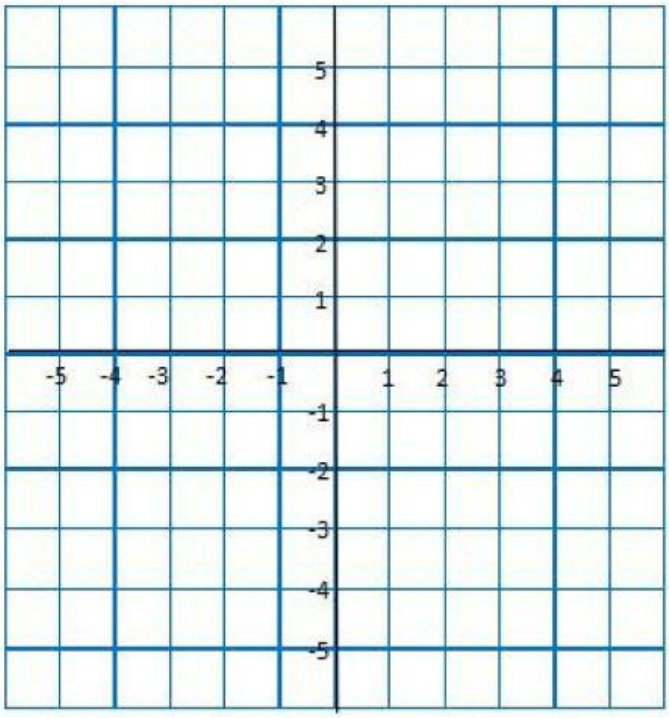
LIVEWORKSHEETS

Quadratic Equations

19) Complete the table of values for $y = x^2 - 2$

x	-3	-2	-1	0	1	2
y						

Plot the line $y = x^2 - 2$ on the graph.



Write the co-ordinates of the vertex.

(4 marks)

LIVEWORKSHEETS