Addvance Maths.com

End of KS3

Practice Test

Surname: .....

Other names: .....

Year 9 Revision Guide:www.addvancemaths.com/year9/

Answers: www.addvancemaths.com/year9/ks3practice/

Instructions

- Use black ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
- If blank paper is used, write down the question's number
- You must show all your working out.

Information

- The marks for each question are shown in brackets.
- Blank paper is provided at the end if extra space is needed.
- The questions are arranged in order of increasing difficulty.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Year 9

1) Expand:

$2(5x - 3) =$

$3a(4a - 2b) =$

$(b - 2)(4 - b) =$

$(2x - 3)(3x - 10) =$

(6)

2) Factorise:

$4x - 18 =$

$a^2 - 8a =$

$x^2 - 6x + 8 =$

$a^2 - 13a - 30 =$

(6)

3) Amy and Brian share £40 in a ratio of 5:3.

How much money does Amy receive?

(2)

4) Justin and Sara share some sweets in a ratio of 7:5

Justin receives 14 more sweets than Sara.

How many sweets does Sara receive?

(3)

5) Using a compass and ruler, construct an equilateral triangle with side length 6cm.
You ***must*** show your construction lines.

(2)

6) A shop must increase its prices because of a tax increase. The shop increases prices by 12%.

a) A table cost £350 before the increase. What is the price now?

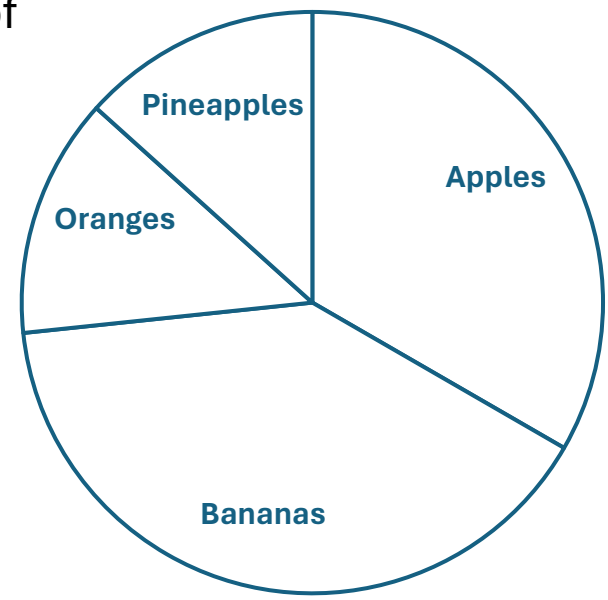
b) The new price of a lamp is £179.20.
What was the price before the increase?

(3)

7) The piechart shows the number of fruit sold at a market.

10 apples were sold.

Complete the table:

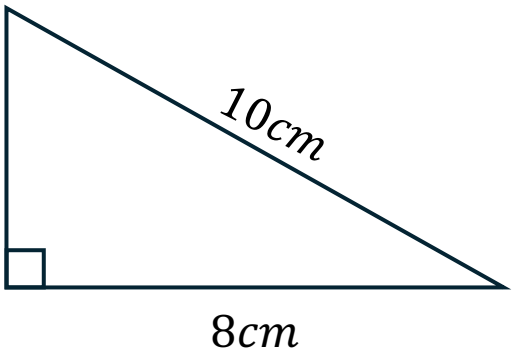


Fruit	Frequency
Apples	10
Bananas	
Oranges	
Pineapples	

(3)

8) Look at the right-angled triangle.

Calculate it's area.



(3)

9) Solve these equations:

$3 - 2x = 11$

(2)

$8(x + 3) - 2 = 70$

(2)

$\frac{2x + 5}{3} = 10$

(2)

10) Each interior angles of a regular polygon measures $156°$.

a) Explain what the word ***regular*** means in the context of polygons.

_____

_____

(1)

b) How many sides does the polygon have?

(3)

11) $x = 4.1\dot{5}\dot{6}$

Using an algebraic method, write x as a fraction in its simplest form.

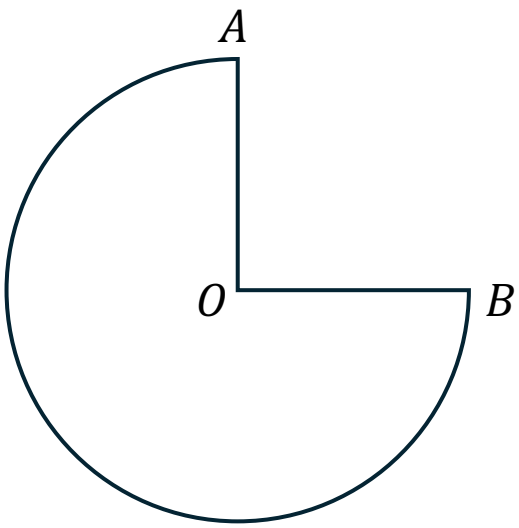
You ***must*** show your working.

(3)

12) A logo is made from a cutting a out part of a circle.
The angle AOB is a right-angle, where O is the centre of the circle.

The distance OB is 5 cm.

What is the area of the logo?



(2)

13) A man runs 1300 metres in 6 minutes.

What is his speed in kilometres per hour?

Give your answer to 3 significant figures.

(3)

14) The time taken for birds to find a hidden treat is displayed in the table.

Time Taken (s)	Frequency
$0 < t \leq 5$	2
$5 < t \leq 10$	4
$10 < t \leq 20$	10
$20 < t \leq 40$	3

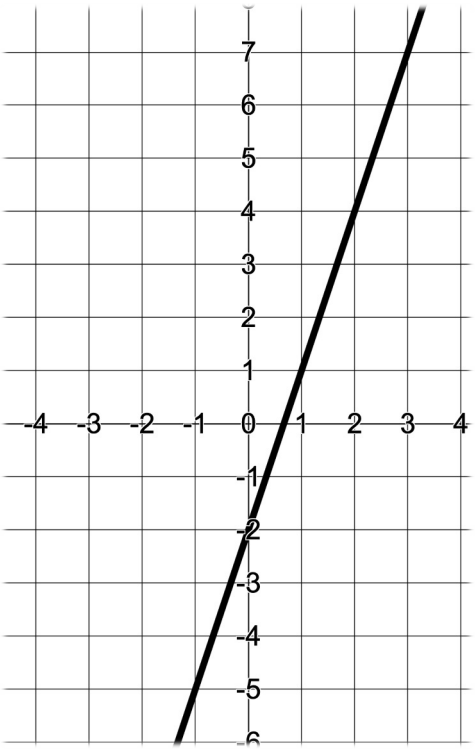
a) What is the modal class?

b) What is the mean time taken?

(3)

15) Look at the graph.

What is the equations of the straight line?



(2)

16) A line passes through the coordinates $(5,8)$ and $(7,-2)$.

What is the equation of this straight line?

(3)

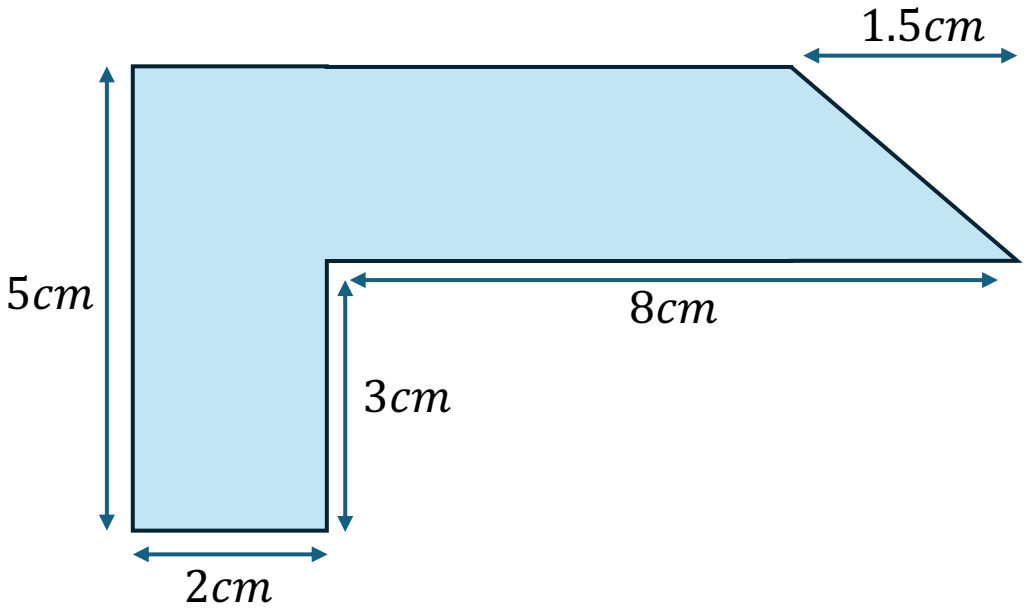
17) A biased 6-sided dice is rolled 50 times. The probability of scoring each number is given in the table below.

Result	1	2	3	4	5	6
Probability	0.12	0.2	0.34	0.06	$3x$	x

How many times would you expect to score a 5?

(2)

18) Calculate the area of the shape below. Give your answer in cm^2.



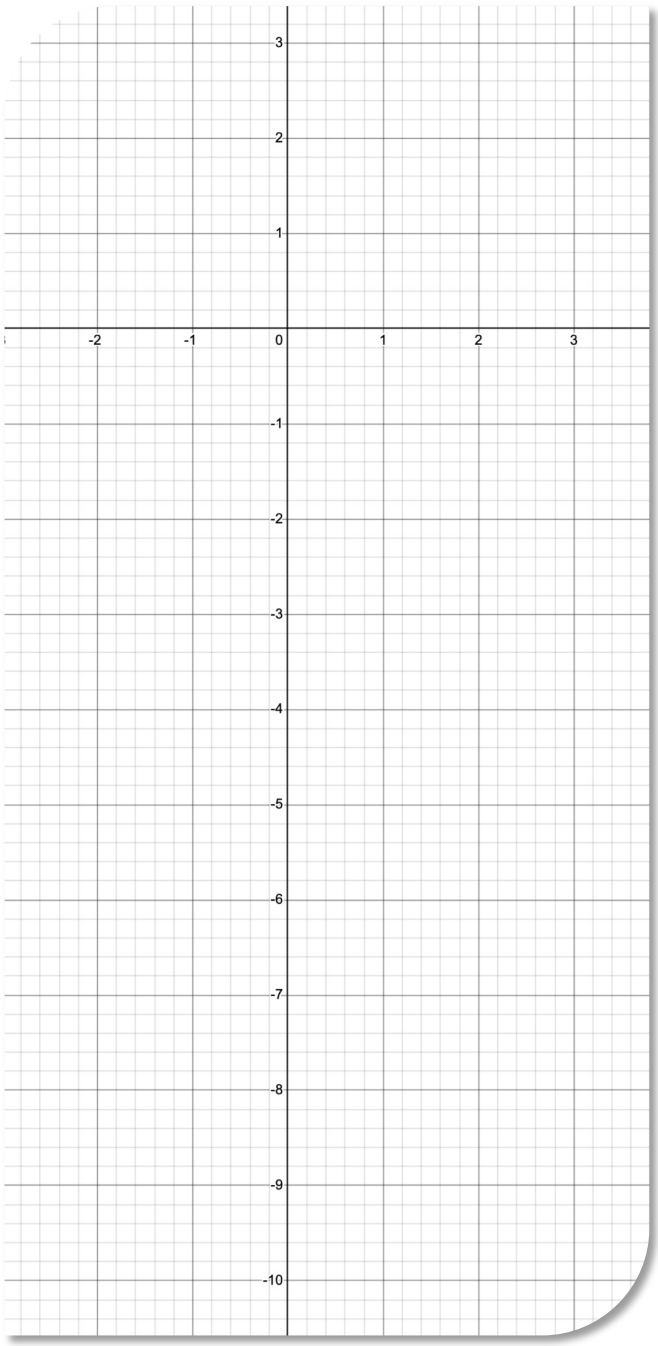
(3)

19) Consider the equation $y = 3x - x^2$

a) Complete the table of values for this equation.

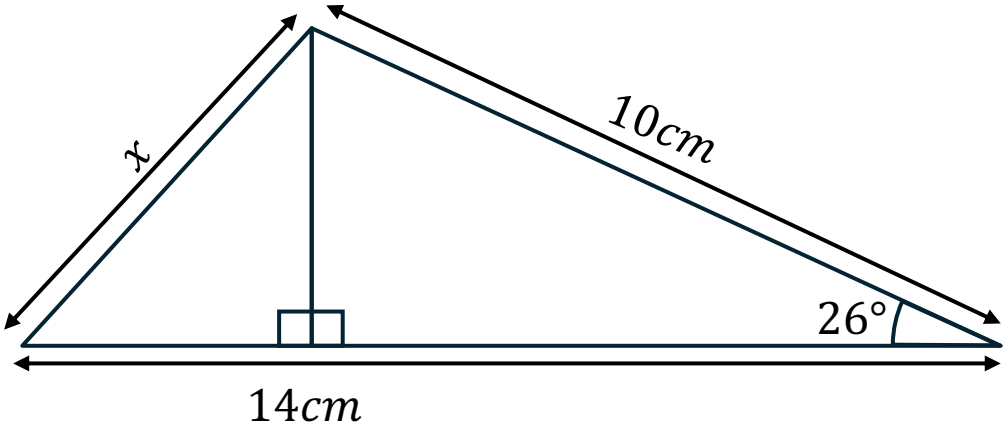
x	-2	-1	0	1	2	3
y						

b) Sketch the equation on the axes below.



(3)

20) Find x.



(4)

22) Simplify:

$(3xy^4)^3 =$

$5x^0 =$

$\frac{a \times a^{10}}{a^4} =$

$(x^3 - 2y)(3yx - 2x^2) =$

(7)