THIRD SPACE LEARNING

November Advanced Information:

Paper 3 Foundation

Edexcel

THIRD SPACE LEARNING

Name

Total marks

Instructions

- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- Answer all questions.
- Answer the questions in the spaces provided
  – there may be more space than you need.
- You must show all your working.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- Calculators may be used.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Information

- The total mark for this paper is 80
- The marks for each question are shown in brackets
  – use this as a guide as to how much time to spend on each question.

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.

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

This practice paper is based on the topics from the **advanced information for the November 2022 exam series.**

Please note, this practice paper is an example to help revision, these topics can be tested in other ways and other topics may be included in the actual papers

1 Calculate $\frac{1}{4}$ of 12.

(Total for Question 1 is 1 mark)

---

2 Write down a multiple of 6 from the list of numbers.

3 8 18 2 32

(Total for Question 2 is 1 mark)

---

3 Convert 3.9kg to grams

g

(Total for Question 3 is 1 mark)

---

4 Write these decimals in order, starting with the smallest.

0.13 0.103 1.03 0.11 0.111

(Total for Question 4 is 1 mark)

---

5 Write down the value of the 2 in the number 43521.

(Total for Question 5 is 1 mark)

---

6 (a) Calculate $\frac{4^2+\sqrt{10+2}}{2.5}$

Write down all the figures on your calculator display.

(2)

(b) Round your answer to 2 decimal places.

(1)

(Total for Question 6 is 3 marks)

---

7 Here are the first six terms of a Fibonacci sequence.

In a Fibonacci sequence, the next term in the sequence is found by adding the previous two terms.

1 1 2 3 5 8

(a) Write down the next two terms in the sequence.

(2)

(b) Is the number 50 in the sequence? Show how you decide.

(2)

(Total for Question 7 is 4 marks)

---

8 Yasmin is making some pancakes. Her recipe makes 6 pancakes.

Flour	100g
Eggs	2
Milk	250ml

Yasmin wants to make 15 pancakes.

Complete the table to show how much she will need of each ingredient.

Flour	.....g
Eggs	.....
Milk	.....ml

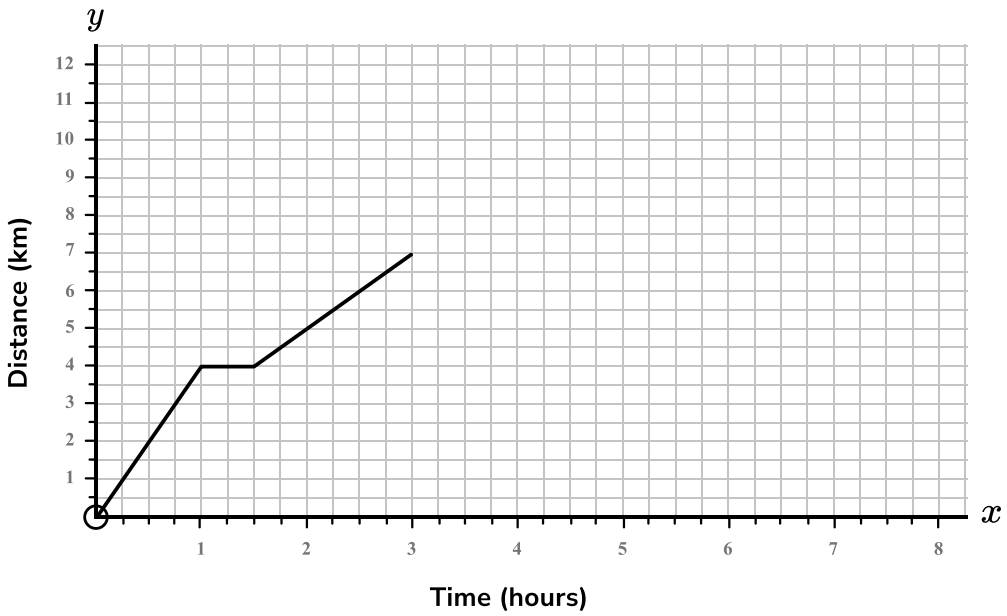
(Total for Question 8 is 3 marks)

9 Circle the fraction that is between 0.5 and 0.6.

$\frac{2}{3}$ $\frac{7}{9}$ $\frac{5}{9}$ $\frac{5}{11}$

(Total for Question 9 is 2 marks)

10 Becca goes for a walk. This graph shows the first part of her journey.



(a) How far from her starting point is Becca after 2 hours?

km

(1)

(b) Next Becca stops for 1 hour before walking home at a speed of 3.5km/hour.

Draw this on the distance time graph

(3)

(c) Andy goes for a walk. His average speed is 5.4km/hour.

Given that 8km ≈ 5 miles, convert Andy's speed to miles per hour.

mph

(2)

(Total for Question 10 is 6 marks)

11 Here is a section of Fred's bank statement.

Date	Description	Paid in	Paid out	Balance
31/08/22	Wages	£1540.20		£1552.68
01/09/22	Rent		£700	£.....
03/09/22	Bill		£63.51	£789.31
04/09/22	Money transfer	£.....		£839.31
04/09/22	Card payment		£.....	£756.32

Fill in the gaps in the statement.

(Total for Question 11 is 3 marks)

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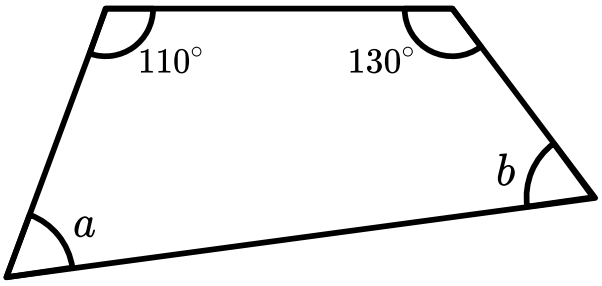
12 Here is a quadrilateral.



Amy wants to find the size of angles a and b.

Here is her working:

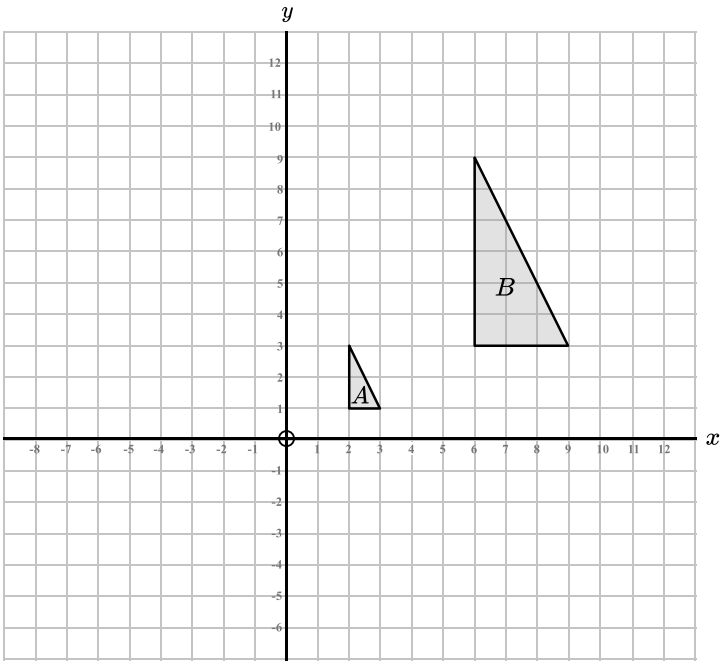
360 - 110 - 130 = 120

120 ÷ 2 = 60°

Amy has made an assumption. Explain Amy's assumption and state whether her assumption is correct.

(Total for Question 12 is 2 marks)

13



(a) Draw the line $x = -1$.

(1)

(b) Reflect the shape A in the line $x = -1$.

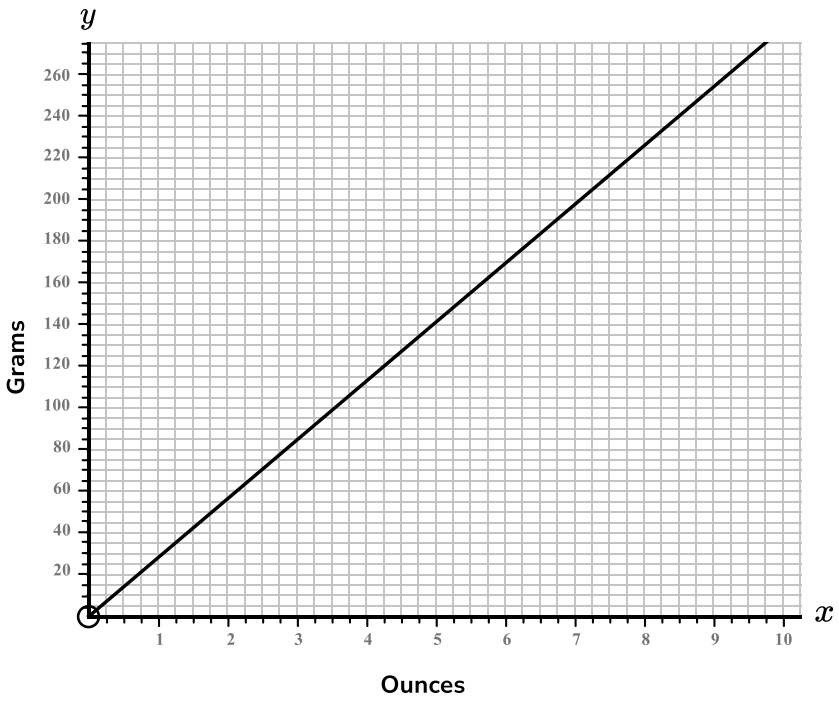
(2)

(c) Describe the transformation which takes shape A to shape B.

(2)

(Total for Question 13 is 5 marks)

14 This graph can be used to convert between ounces and grams.



(a) Use the graph to convert 6 ounces to grams.

g

(2)

(b) 1 pound is 16 ounces.

A baby is born weighing 7 pounds 8 ounces.

Work out the baby's weight in grams.

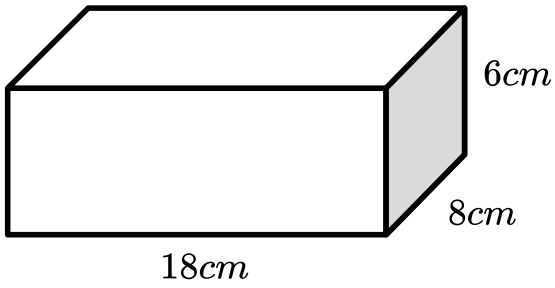
g

(2)

(Total for Question 14 is 4 marks)

15 Calculate the volume of the cuboid.

Give units in your answer.



(Total for Question 15 is 3 mark)

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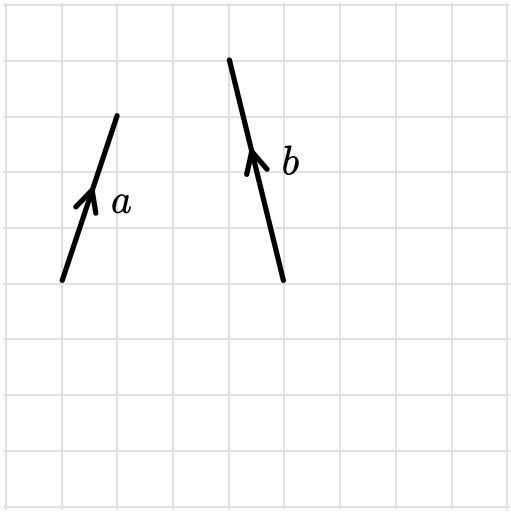
16 The vectors a and b are shown on the grid below.



(a) The vector c is $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$. On the grid draw and label the vector c.

(2)

(b) Find the vector $2a + b$ as a column vector.

(3)

(Total for Question 16 is 5 marks)

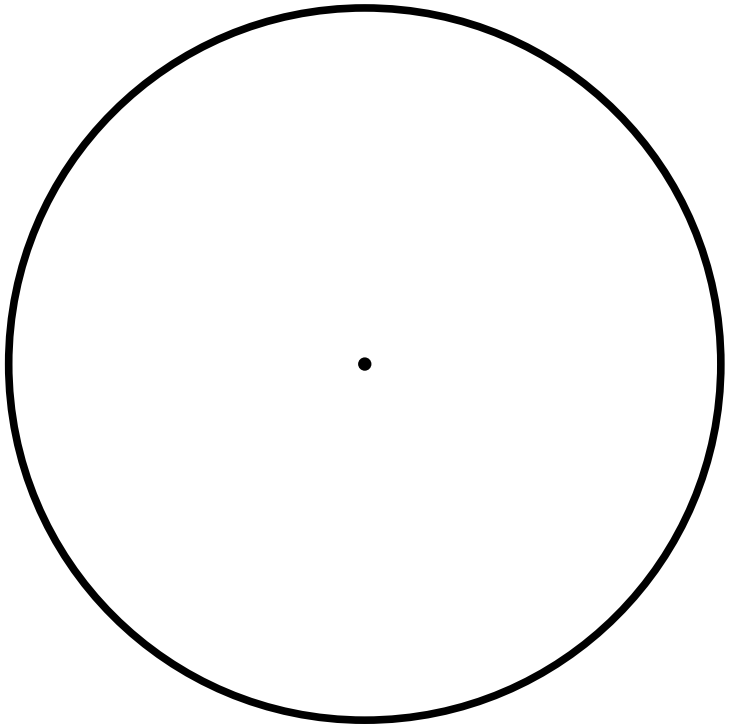
---

17 160 people are asked their favourite colour.

The results are shown in the table below.

Construct a pie chart to show this data.

Colour	Frequency
Red	32
Blue	48
Green	40
Yellow	12
Purple	28

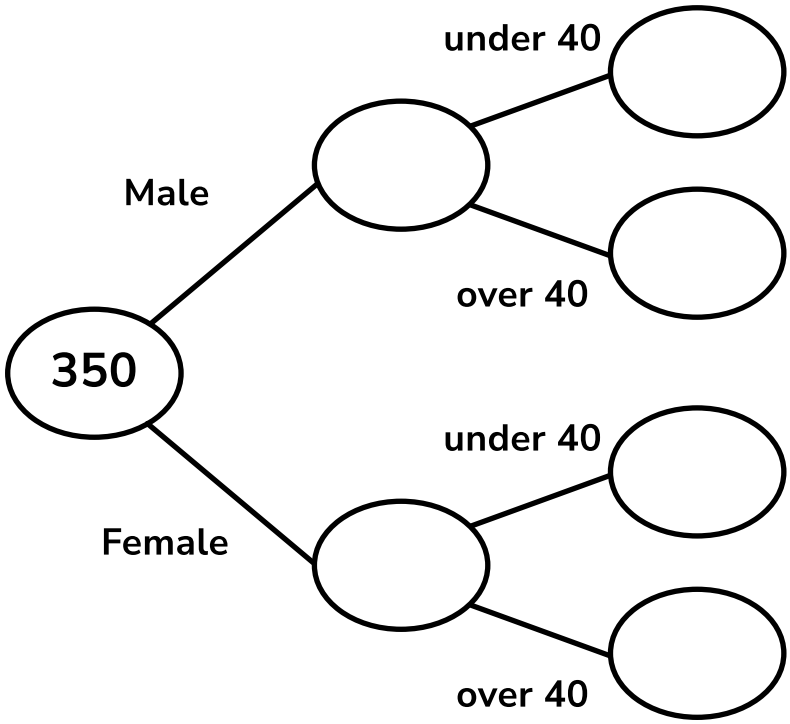


(Total for Question 17 is 4 marks)

18 In an office of 350 employees, the ratio of male employees : female employees is 4 : 3.

Of the males, the ratio of under 40*s* : over 40*s* is 3 : 2.

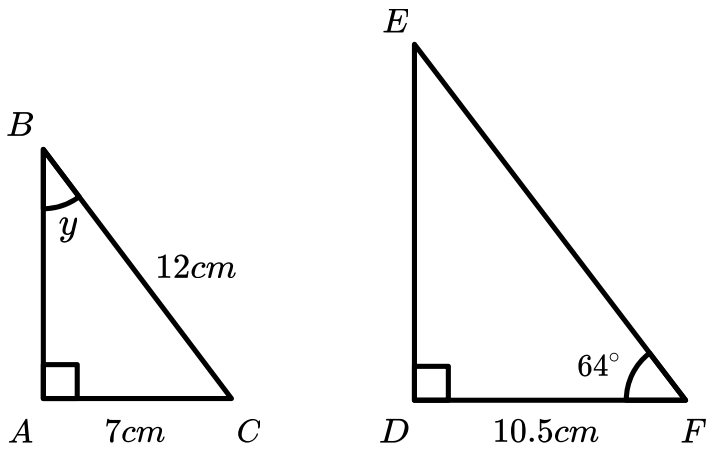
Of the females, the ratio of under 40*s* : over 40*s* is 1 : 4.



Use the frequency tree to find the total ratio of employees under 40:employees over 40.

(Total for Question 18 is 4 marks)

19 ABC and DEF are similar triangles.



(a) Work out the size of angle y.

°

(1)

(b) Work out the length EF.

cm

(2)

(Total for Question 19 is 3 marks)

---

20 The mean length of time that a group of 10 teachers have been working at a school is 5.5 years.
A teacher who has worked at the school for 6 years leaves and a new teacher joins the school.
Calculate the mean for the new group of teachers.

years

(Total for Question 20 is 3 marks)

---

21 (a) Write the number 621000 in standard form.

(2)

(b) Write 1.73×10^{-3} as an ordinary number.

(1)

(c) Work out the value of $(8.2 \times 10^{5}) + (3.9 \times 10^{4})$.

Give your answer in standard form.

(2)

(Total for Question 21 is 5 marks)

---

22 $T = \dfrac{40M - N^2}{3}$

Make M the subject of the formula.

(Total for Question 22 is 2 marks)

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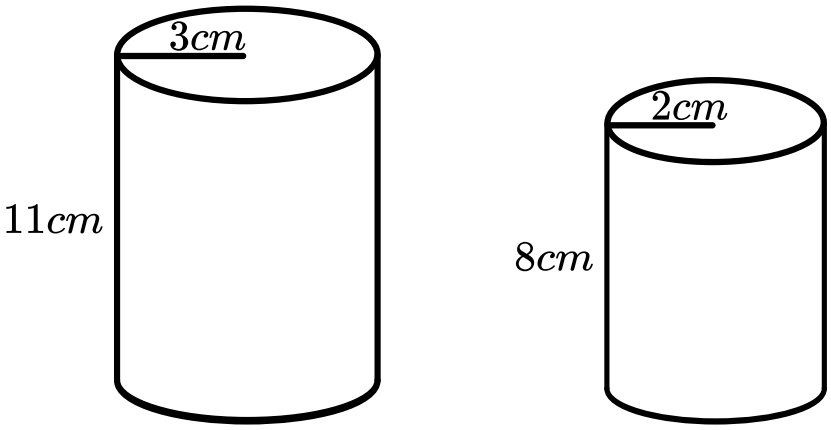
23 A drink is available in two can sizes.



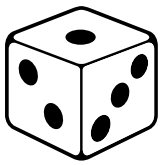
A shop sells large cans for £1 and small cans for 50*p*.

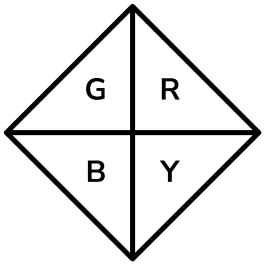
Is it better value to buy one large can or two small cans?

Show how you decide.

(Total for Question 23 is 3 marks)

24 In a fairground game, players roll a dice and spin a spinner.

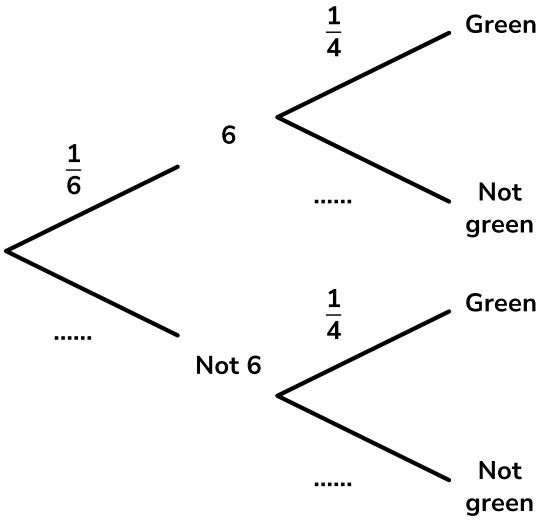




It costs £1 to play the game.

If a player rolls a 6 they win 50*p*. If a player rolls a 6 and lands on green they win £5.

(a) Complete the tree diagram.



(2)

(b) Find the probability that a player wins 50*p*.

(1)

(c) Write the ratio of players who win £5:players who don't win £5.

(3)

(Total for Question 24 is 6 marks)

25 (a) A paddling pool holds 4800*l* of water.

Given that 1 litre = 1000cm^3, find the volume of water held by the paddling pool in cm^3.

cm^3

(2)

(b) Convert the volume to m^3.

m^3

(2)

(c) Water costs £1.58 per cubic metre. Find the cost of filling the paddling pool.

£

(1)

(Total for Question 25 is 5 marks)

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