A screenshot of a cell phone

Description automatically generated

**Statistical diagrams: Pictograms**

**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.
* If your calculator does not have a *π* button, take the value of *π* to be3.142

unless the question instructs otherwise.

**Information**

* The total mark for this paper is **15**. There are **5** questions.
* Questions have been arranged in an ascending order of mean difficulty, as found by all students in the June 2017–November 2019 examinations.
* 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**

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

**1** The pictogram shows information about the number of pictures sold in an art shop in

each of January, February and March.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **January** |  |  |  |  |
| **February** |  |  | **Key:** |  |
| **March** |  |  |  | represents 8 pictures |
| **April** |  |  |  |  |

(*a*)Write down the number of pictures sold in January.

.......................................................

**(1)**

12 pictures were sold in April.

(*b*)Show this information on the pictogram.

**(1)**

(*c*)What was the total number of pictures sold in these four months?

.......................................................

**(2)**

**(Total for Question 1 is 4 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2** There are only apple trees, cherry trees, pear trees and plum trees in an orchard.

The pictogram shows information about the numbers of apple trees, cherry trees and

pear trees in the orchard.

|  |  |  |  |
| --- | --- | --- | --- |
| Apple |  |  |  |
| **Key:**  represents 4 trees |
| Cherry |  |
| Pear |  |
|  |
| Plum |  |

There is a total of 30 trees in the orchard.

Complete the pictogram.

**(Total for Question 2 is 3 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3** David sells CDs in a shop.

The tally chart shows information about the number of CDs David sold

on Monday, on Tuesday and on Wednesday.

|  |  |  |
| --- | --- | --- |
|  | **Tally** | **Frequency** |
| **Monday** |  | 12 |
| **Tuesday** |  | 18 |
| **Wednesday** |  | 8 |

(*a*)Write down **one** thing that is wrong with the tally chart.

......................................................................................................................................................

......................................................................................................................................................

**(1)**

David drew this pictogram to show the information for Tuesday and Wednesday.



(*b*)Write down **one** thing that is wrong with this pictogram.

......................................................................................................................................................

......................................................................................................................................................

**(1)**

**(Total for Question 3 is 2 marks)**

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**4** The pictogram shows information about the number of vinyl records sold in a shop on

Monday and on Tuesday.

|  |  |  |  |
| --- | --- | --- | --- |
| Monday |  |  | Key:    represents  8 vinyl records |
| Tuesday |  |  |
|  |
| Wednesday |  |  |  |
| Thursday |  |  |  |

(*a*)Write down the number of vinyl records sold

(i) on Monday,

.......................................................

**(1)**

(ii) on Tuesday.

.......................................................

**(1)**

On Wednesday and Thursday a total of 36 vinyl records were sold.

The number of records sold on Thursday was 8 times the number of records sold on

Wednesday.

(*b*)Use this information to complete the pictogram.

**(3)**

**(Total for Question 4 is 5 marks)**

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**5** The incomplete pictogram shows information about the number of cycles sold in a shop

on Tuesday, on Wednesday and on Thursday.



A total of 20 cycles were sold on Tuesday, Wednesday and Thursday.

8 cycles were sold on Friday.

15 cycles were sold on Saturday.

Use this information to complete the pictogram.

**(Total for Question 5 is 3 marks)**

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