Essential Skills Wales Essential Application of Number Skills (EAoNS) Level 3 Controlled Task

Candidate Pack

Raising Fitness Levels

Version 2.3 Sample (Set A)

Instructions

- Fill in the candidate information boxes below.
- Complete **all** parts of the task.
- Sign and date the declaration on the next page when you have completed the task.

Candidate name:

Candidate number:

Date registered for EAoNS:

Unique Learner Number (ULN) (if applicable):

Centre name *or* number:

You have up to **8 hours in total** to complete this controlled task.

The total time can be split over a number of sessions.

Details of when each session started and ended **must** be recorded below:

| Date controlled task started : | | | | | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Date controlled task completed (no more than eight weeks later): | | | | | | | |
| Session 1 | Session 2 | Session 3 | Session 4 | Session 5 | Session 6 | Session 7 | Session 8 |
| | Date |
| Duration | Duration | Duration | Duration | Duration | Duration | Duration | Duration |
| Total time spent: Supervisor signature: | | | | | | | |

If more than eight sessions are required, any further dates/durations should be recorded on a separate sheet.

Produced jointly by the four Essential Skills awarding bodies: Agored Cymru City & Guilds Pearson WJEC



This task pack contains a scenario, a set of instructions and source material.

- Read the scenario, instructions and source material carefully before you start.
- You will be supervised throughout your time working on this task.
- You can use most of the equipment normally available to you in a real-life situation, including internet access.
- All work submitted must be **entirely** your own. You are not allowed any help with the skills that are being assessed through this controlled task.
- Hand in all of your work at the end of **each** session. You are not allowed to take any task materials away with you, or have access to these between sessions.
- Sign and date the declaration below when you have completed the task.

Candidate declaration

I confirm that this controlled task is entirely my own work and it was completed during the supervised sessions stated on the front page.

Candidate signature: _____ Date: _____

Task instructions: Raising Fitness Levels

What you need to find out

Scenario

You work on a project to improve people's health and fitness. You have been asked to select a group of people to take part in suitable exercise classes, and calculate how many people can be accommodated in the space available.

The aims of this task are to:

- select a suitable group of people in one region to take part in the classes
- provide information about a target heart rate people should aim for during exercise, and choose an activity for the people in the group
- calculate the maximum number of people that can be accommodated in the room in your chosen region
- make a brief report on your findings.

Use the sources provided.

What you need to do

Part 1

Read through the task and source materials. Make a structured plan to show how you will do this task.

You must include:

- the information you will use from the source materials
- which calculations you choose to do, from a range of possible calculations
- a justification for your choice of at least two of your methods
- how you will present the results for Part 2 and Part 3.

(Total for Part 1: 4 marks)

In Part 2, Part 3 and Part 4, you must:

- show all the calculations you do. If you use a calculator, make a note of what you put into the calculator. If you use a spreadsheet, make a note of the numbers and the formulas you use.
- give your answers to a suitable level of accuracy.

Remember to check your calculations.

Part 2

You need to choose one region for the exercise classes: North, South, West or East. You also need to select a suitable group of people to take part in the exercise classes in your chosen region.

You must:

- use statistics to compare the weekly amount of exercise and the body mass index (BMI) of two groups of people in your chosen region
 - people aged 18 to 39
 - people aged 40 years or more
- present your results in a suitable way
- choose one age group to take part in the exercise classes. Use the results of your calculations to justify your choice.

Remember to check your calculations.

(Total for Part 2: 9 marks)

Part 3

You need to provide information about a target heart rate people should aim for when they exercise at between 50% and 70% intensity. You also need to choose a suitable activity for the people taking part in the exercise classes.

You must:

- calculate the target heart rate for people in the age group you chose in Part 2 when they are exercising at 50% and at 70% intensity
- present your results so that an individual can check whether their heart rate during exercise is suitable for a person of their age.
 Use a different method to the one you used in Part 2.
- choose three exercises that could be carried out by your chosen group
- calculate the percentage change between a typical starting heart rate and the heart rate after each of your chosen exercises
- select one exercise for your target group. Use your results to justify your choice.

Remember to check your calculations.

(Total for Part 3: 9 marks)

Part 4

You must:

• calculate the maximum number of people that will fit in an exercise room in the region you chose in Part 2.

You need to consider your results in Part 2, Part 3 and Part 4 for your report.

You must:

- justify your methods of presentation
- make one comment to explain how far your results meet your purpose
- comment on how any possible sources of error may have affected your results.

Remember to check your calculations.

(Total for Part 4: 11 marks)

Sources you should use

Source 1

• Table - exercise participation rates and BMI of people in different regions

Source 2

• Formula – exercise intensity level

Source 3

• Table - heart rate after exercises and calories burned

Source 4

• Diagrams - rooms in different regions

Source 1 Table – exercise participation rates and BMI of people in different regions (page 1 of 2)

| Initials of person | Region | Age (years) | Gender | Weekly exercise (hours) | Number of sessions per week | Body Mass Index (BMI) |
|--------------------|--------|----------------|--------|-------------------------------|-----------------------------------|--------------------------|
| СН | south | 30 | f | 2.0 | 2 | 26.3 |
| DD | east | 32 | m | 5.75 | 5 | 26.3 |
| BM | south | 42 | m | 2.0 | 4 | 27.8 |
| BF | north | 47 | f | 3.5 | 7 | 26.8 |
| ED | east | 38 | f | 2.0 | 5 | 28.4 |
| FF | west | 28 | f | 2.0 | 1 | 25.6 |
| EH | east | 50 | f | 1.5 | 2 | 25.1 |
| AD | north | 34 | m | 2.0 | 2 | 27.1 |
| BH | south | 20 | m | 4.0 | 6 | 25.4 |
| AE | north | 40 | m | 0.0 | 0 | 27.2 |
| AN | north | 27 | f | 4.5 | 3 | 23.7 |
| AC | north | 26 | m | 3.5 | 5 | 26.9 |
| FK | west | 46 | f | 2.5 | 5 | 26.5 |
| DG | east | 43 | m | 4.0 | 4 | 26.2 |
| DC | east | 27 | m | 6.5 | 3 | 27.0 |
| EC | east | 31 | f | 2.0 | 4 | 27.3 |
| CN | south | 51 | f | 4.0 | 5 | 26.8 |
| CP | south | 52 | f | 3.0 | 2 | 26.9 |
| EE | east | 41 | f | 2.0 | 1 | 24.1 |
| BA | north | 32 | f | 0.0 | 0 | 24.2 |
| AH | north | 48 | m | 1.75 | 2 | 27.0 |
| BB | north | 36 | f | 2.0 | 1 | 25.0 |
| AK | north | 52 | m | 0.0 | 0 | 27.2 |
| EB | east | 29 | f | 2.0 | 1 | 27.1 |
| FH | west | 37 | f | 1.5 | 1 | 24.4 |
| EG | east | 46 | f | 1.5 | 1 | 24.5 |
| BG | north | 53 | f | 3.25 | 4 | 26.5 |
| DB | east | 24 | m | 5.0 | 6 | 26.5 |
| FB | west | 52 | m | 0.0 | 0 | 25.8 |
| FJ | west | 44 | f | 1.5 | 1 | 24.5 |
| BC | north | 37 | f | 2.0 | 1 | 25.2 |
| EF | east | 44 | f | 1.5 | 1 | 24.3 |
| BJ | south | 23 | m | 3.0 | 2 | 24.8 |
| CF | south | 26 | f | 0.0 | 0 | 26.9 |
| EA | east | 25 | f | 4.75 | 5 | 26.9 |
| AA | north | 23 | m | 9.75 | 6 | 23.6 |
| EJ | east | 51 | f | 0.0 | 0 | 26.2 |
| FM | west | 52 | f | 3.0 | 2 | 25.8 |
| AF | north | 42 | m | 2.25 | 2 | 25.9 |
| BL | south | 35 | m | 4.25 | 4 | 24.3 |

Source 1 Table – exercise participation rates and BMI of people in different regions (page 2 of 2)

| Initials of person | Region | Age (years) | Gender | Weekly exercise (hours) | Number of sessions per week | Body Mass Index (BMI) |
|-----------------------|--------|----------------|--------|----------------------------|--------------------------------|--------------------------|
| DL | east | 22 | f | 4.75 | 3 | 26.2 |
| FL | west | 49 | f | 2.5 | 2 | 24.8 |
| DA | east | 21 | m | 6.0 | 4 | 25.4 |
| EK | west | 20 | m | 7.25 | 4 | 25.0 |
| FD | west | 22 | f | 6.0 | 5 | 24.9 |
| EL | west | 24 | m | 5.0 | 6 | 25.1 |
| CJ | south | 32 | f | 3.5 | 7 | 26.5 |
| DH | east | 46 | m | 3.75 | 2 | 27.3 |
| СК | south | 37 | f | 3.0 | 2 | 26.8 |
| BK | south | 36 | m | 3.0 | 4 | 25.0 |
| FA | west | 49 | m | 0.0 | 0 | 26.9 |
| EJ | west | 36 | m | 2.0 | 1 | 25.2 |
| AL | north | 22 | f | 3.5 | 2 | 24.0 |
| DF | east | 40 | m | 4.5 | 3 | 26.1 |
| FG | west | 33 | f | 1.0 | 1 | 24.8 |
| EK | west | 42 | m | 1.5 | 1 | 25.5 |
| СВ | south | 47 | m | 0.0 | 0 | 27.9 |
| CE | south | 23 | f | 4.75 | 4 | 26.9 |
| EG | west | 29 | m | 3.0 | 2 | 24.3 |
| CD | south | 53 | m | 1.0 | 1 | 27.8 |
| FE | west | 26 | f | 4.0 | 5 | 25.2 |
| AJ | north | 51 | m | 1.5 | 1 | 28.5 |
| CL | south | 43 | f | 3.5 | 2 | 27.0 |
| BL | south | 40 | m | 3.0 | 2 | 26.1 |
| FN | west | 54 | f | 2.5 | 2 | 25.4 |
| BD | north | 43 | f | 3.75 | 5 | 26.3 |
| CC | south | 51 | m | 1.0 | 1 | 27.6 |
| FC | west | 54 | m | 0.5 | 1 | 26.4 |
| CG | south | 27 | f | 2.0 | 2 | 26.2 |
| AB | north | 25 | m | 7.5 | 5 | 24.1 |
| СМ | south | 49 | f | 4.0 | 5 | 27.2 |
| DJ | east | 53 | m | 4.5 | 6 | 26.2 |
| AM | north | 26 | f | 5.0 | 3 | 23.6 |
| CA | south | 45 | m | 0.0 | 0 | 28.2 |
| BE | north | 44 | f | 3.75 | 2 | 27.0 |
| AG | north | 45 | m | 2.0 | 1 | 26.5 |
| DK | east | 55 | m | 4.5 | 5 | 24.8 |
| EH | west | 31 | m | 2.75 | 2 | 24.3 |
| EL | west | 44 | m | 1.5 | 1 | 25.2 |
| DE | east | 34 | m | 4.75 | 4 | 26.6 |

Note: Body Mass Index (BMI) is a measure that uses height and weight to work out if a person's weight is healthy. For most adults, an ideal BMI is between 18.5 and 24.9

Source 2 Formula – exercise intensity level

Where E is the exercise intensity level (%) h is the heart rate (beats per minute) a is the age in years

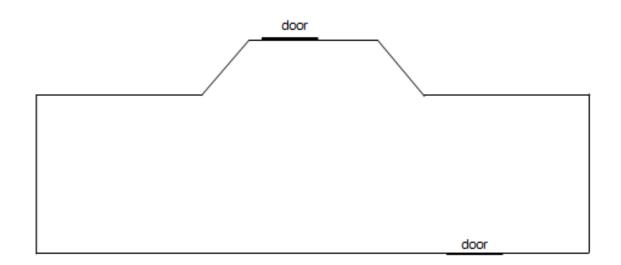
Source 3 Table – heart rate after exercises and calories burned

| Exercise | Typical heart rate after exercise (beats per minute)* | Calories (kcal) burned in 30 minutes of exercise | | | |
|---|---|--|--|--|--|
| Pilates | 89 | 167 | | | |
| Yoga | 93 | 149 | | | |
| Aerobics | 110 | 205 | | | |
| Step | 125 | 223 | | | |
| Bodypump | 144 | 298 | | | |
| Boxercise | 135 | 335 | | | |
| Bootcamp | 152 | 298 | | | |
| Kettles | 155 | 372 | | | |
| Typical starting heart rate 60 beats per minute (bpm) For a well-trained athlete it is 40-60 bpm | | | | | |

* These figures will vary according to the individual, how often they exercise and how much effort they put into the exercise.

Source 4 Diagrams – rooms in different regions

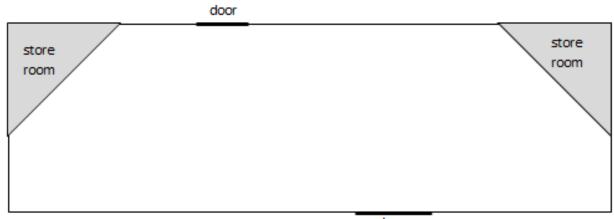
Northern Location



Scale 1:150

Allow 15 m² per person.

Eastern Location

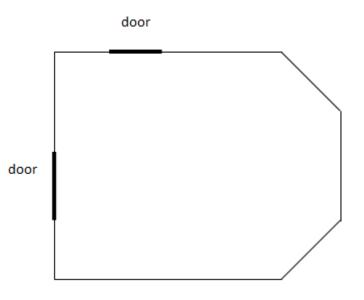


door

Scale 1:250

Allow 15 m² per person.

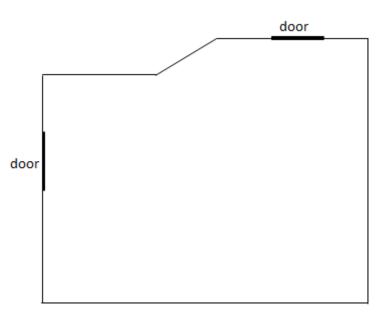
Southern Location



Scale 1:200

Allow 15 m² per person.

Western Location



Scale 1:250

Allow 15 m² per person.