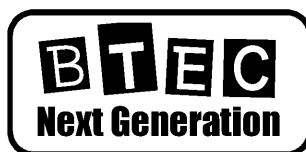
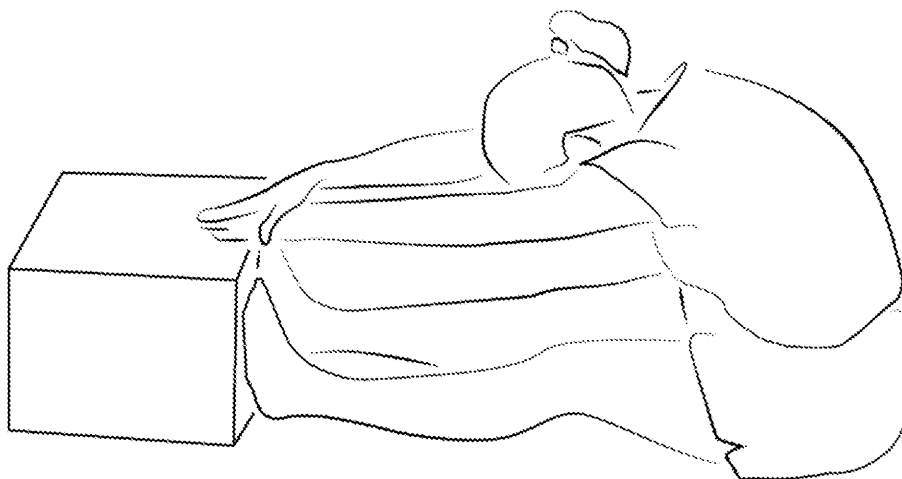


# External Practice Assessments

*for BTEC First in Sport*

*Unit 1: Fitness for Sport and Exercise*



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[zigzageducation.co.uk](http://zigzageducation.co.uk)

POD 4675

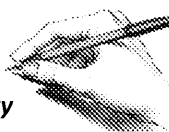
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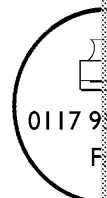
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School Name		Position

Overall, what did you think about this resource? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

I particularly like this resource because... \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

How does it help you or your students? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

It is better than some other resources because... \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How well does it match your specification (& which specification is this)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Other comments, suggestions for improvements, errors found (please give page numbers)

\_\_\_\_\_  
\_\_\_\_\_

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## Teacher's Introduction

This assessment pack has been developed to provide students with the opportunity to practice for external assessment for this unit. The questions have been developed in line with the mark scheme used in the external assessment.

Each assessment should be completed in one hour. There are 50 marks available and answers provided for peer or teacher marking.

We have also included a grid to show the content of the assessment to indicate what is covered by each assessment.

Marking guidance for the longer response questions can be downloaded from [zigzag.at/BTECSport2012SAMs](http://zigzag.at/BTECSport2012SAMs) (shortcut to the Edexcel website).

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Topics
<b>Learning Aim A</b>
<b>Components of Fitness</b>
Aerobic Endurance
Muscular Endurance
Flexibility
Speed
Muscular Strength
Body Composition
<b>Components of Skill-Related Fitness</b>
Agility
Balance
Coordination
Power
Reaction Time
Recognition of Fitness Components Needed for Sport
<b>Why Fitness Components Are Important for Success</b>
Meeting Physical Demands
Meeting Skill-Related Demands
Performing Efficiently
Giving Consideration to the Event/Position Played
<b>Exercise Intensity</b>
Measure Heart Rate
Target Zones, HR Max
Calculate 60–85% HR Max, Know that This Is Recommended Fitness
Borg 6–20 RPE Scale
Relationship between RPE and Heart Rate
<b>FITT Principles of Training</b>
Frequency
Intensity
Time
Type
Application of FITT Principles
<b>Additional Principles of Training</b>
Progressive Overload
Specificity
Individual Needs/Differences
Adaptation
Reversibility
Variation
Rest and Recovery
Application of Principles
<b>Learning Aim B</b>
<b>Requirements for Fitness Training Methods</b>
Safe, Correct Use of Equipment
Safe, Correct Use of Technique
Requirements (Warm-Up, Cool-Down)
Linking Training Methods to Fitness Components
Advantages/Disadvantages of Training Methods
Application of Exercise Intensity to Training Methods
Appropriate Application of Training Methods for Given
Appropriate Application of Training Methods to Suit C
Fitness Training Methods for:

Assessment		
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<i>Flexibility Training</i>
Static Stretching
Ballistic Stretching
PNF Technique
<i>Strength, Muscular Endurance and Power Training</i>
Circuit Training
Free Weights
- Order of Exercises
- Reps/Loads
- Intensity
- Upper/Lower Body
- Pull/Push
Plyometrics
<i>Aerobic Endurance</i>
- Continuous Training
- Fartlek Training
- Interval Training
- Circuit Training
<i>Speed</i>
- Hollow Sprints
- Acceleration Sprints
- Interval Training
<b>Learning Aim C</b>
Sit-and-Reach Test
Grip-Dynamometer Test
Multistage-Fitness Test
Forestry Step Test
Definition VO <sub>2</sub> Max
35 Metre Sprint Test
Illinois Agility Run
Vertical-Jump Test
One-Minute Press-Up / One-Minute Sit-Up Test
Body Composition
- BMI
- BIA
- Skinfold Testing (Jackson-Pollock Nomogram)
Importance of Fitness Testing to Sports Performers and
Requirements for Admin of Each Test
- Pre-Test Procedures
- Knowledge of Standard Test Methods and Equipment
- Purpose of Each Fitness Test
- Accurate Measurement and Recording
- Basic Processing of Test Results (Using Published
Units of Measurement)
- Select Appropriate Test for Given Situation/Performance
- Understand the Terms 'Reliability', 'Validity' and 'Accuracy'
- Advantages and Disadvantages of Test Methods
Interpretation of Fitness Test Results
Compare Fitness Test Results to Normative Data
Compare Results to Peers
Draw Conclusions
Analyse and Evaluate Tests
Suggest and Justify Recommendations Based on Test Results
Suggest and Justify Appropriate Training Methods That

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*Unit 1: Fitness for Sport and Exercise*

## **Practice Assessment 1**

**Time allowed:** 1 hour

The total mark for this paper is 50.

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1. Linda does regular stretching as part of her gymnastics training.

a) Which component of physical fitness will be developed by regular stretching?

- flexibility
- aerobic endurance
- muscular endurance
- muscular strength

There are different kinds of stretching methods.

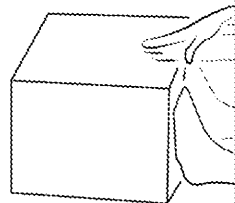
b) Choosing from the list below, write the correct stretching method for each of the following descriptions.

- alternating between static stretching and isometric contractions
- fast, jerky movements such as bouncing
- holding the muscle still for 5-10 seconds in a stretched position

- *ballistic*
- *PNF technique*
- *static*

Picture A shows a girl performing a test used to determine flexibility.

c) What is this test called? (1)



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2. Figure A demonstrates the set-up of a type of fitness training for aerobic endurance. It has several stations set up with exercises for different parts of the body.

David exercises for one minute at each station with 30-second rests. He then rests for three minutes before repeating.

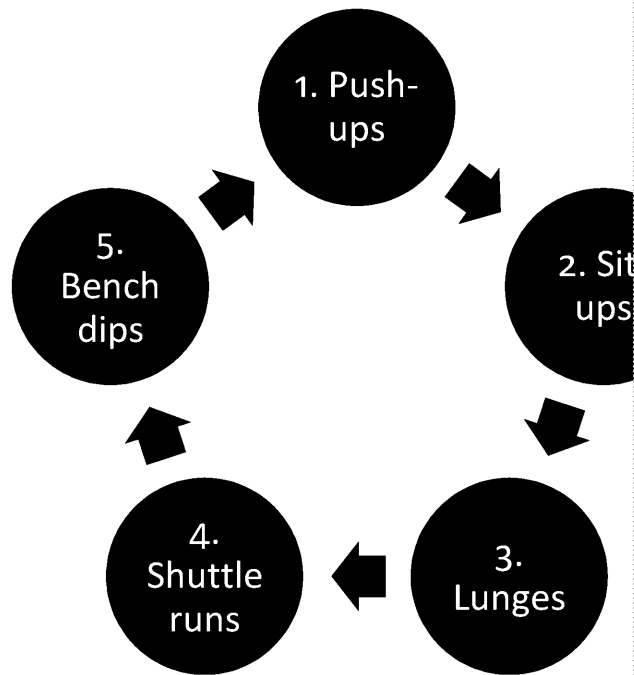


Figure A

a) What is this type of fitness training called?

circuit training

fartlek training

resistance training

plyometrics

b) Identify **two** specific ways in which the intensity of the training could be increased.

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3. Roger is 1.9 metres tall and weighs 68 kg.

a) Calculate Roger's body mass index.

Write your answer in the box below.

Show

b) Interpret Roger's BMI using Table A.

Tick the correct box.

Table A

Underweight	Normal	Overweight
<20 <input type="checkbox"/>	20–25 <input type="checkbox"/>	25–30 <input type="checkbox"/>

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Antonio and Jessica have the same BMI.

Antonio thinks that because their BMI is the same, their BMI *must be the same*. Jessica thinks that their body fat percentage will be different despite having the same BMI.

c) Who is correct?

Antonio

Jessica

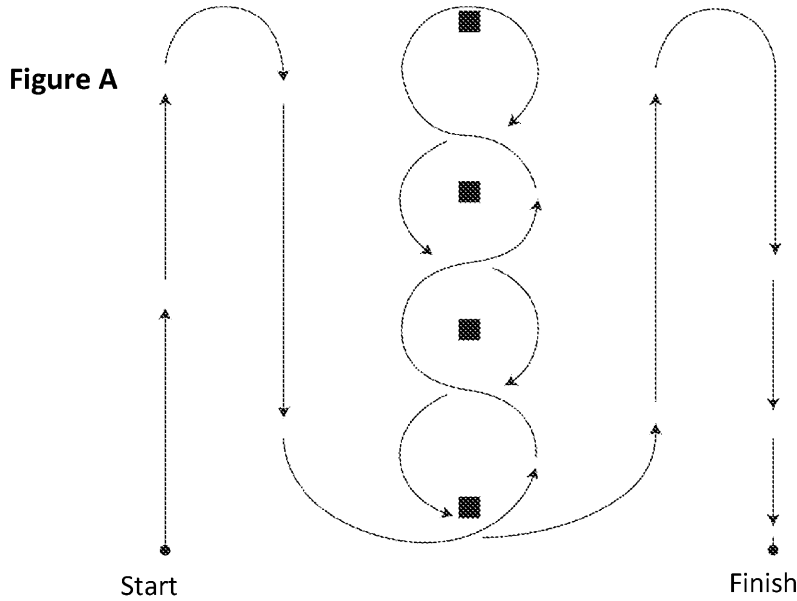
d) Identify one pre-test procedure which must be done before an individual's measurement to calculate BMI.

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4. Some students carry out the Illinois run (Figure A), which uses cones in a specific pattern as quickly as possible.



a) Which component of physical fitness is this test used to measure?

strength

agility

aerobic endurance

muscular endurance

Hannah (a female student) completes the test in 19.2 seconds.

b) Using the table below, rate Hannah's score.

poor

average

above average

excellent

Table A<sup>1</sup>

Gender	Excellent*	Above Average*	Average*	Below Average*
Male	<15.2	15.2–16.1	16.2–18.1	18.2–21.7
Female	<17	17–17.9	18–21.7	21.8–24.7

\*(values in seconds)

<sup>1</sup> Values from: <http://www.brianmac.co.uk/illinois.htm>

5. Skill-related fitness components are important for success in different sports. Identify which skill-related fitness components athletes use to perform the following roles.

a) This goalkeeper successfully saves the goal by watching the ball and quickly responding by diving to catch it.

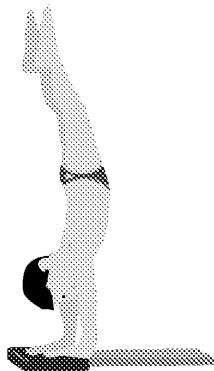


reaction

balance

flexibility

b) This diver is able to hold the handstand for several minutes, remaining stable and not falling off the diving board.

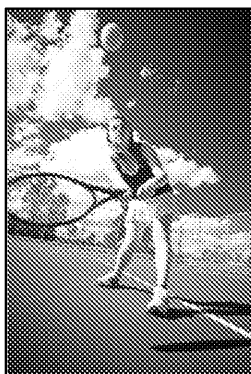


power

balance

agility

c) The tennis player applies strength and speed to launch the ball across the court.



coordination

power

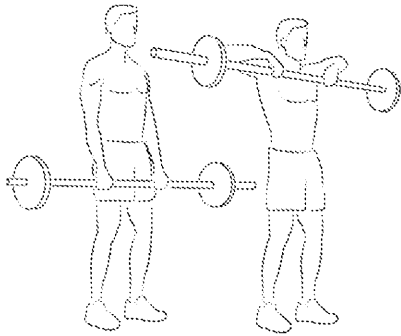
reaction

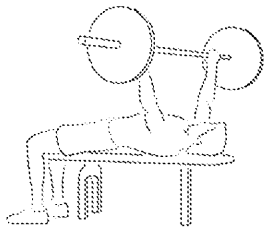
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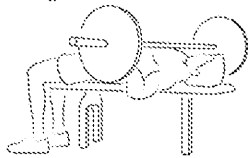


6. Free weights can be used to develop muscular strength a

a) Identify the exercises being performed using a bar below.







When using free weights, the weight and the repetitions achieve different training goals. The weight used is calculated as a percentage of one rep max.

b) Complete the table below with the correct weight to achieve the following training goals. Choose your answer from the options below.

<b>Training Goal</b>	<b>Intensity (%1RM)</b>	
Strength		
Elastic strength		
Strength endurance		



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7. The order of exercises is an important consideration in w  
**exercises** should be done before **assistance exercises**.

a) Explain two differences between core and assistan

b) Explain why people may alternate between doing push and pull exercises.

8. Mohammed is 18 years old.

a) Work out Mohammed's maximum heart rate (HR m

- |                                  |                                  |
|----------------------------------|----------------------------------|
| <input type="checkbox"/> 200 bpm | <input type="checkbox"/> 202 bpm |
| <input type="checkbox"/> 205 bpm | <input type="checkbox"/> 208 bpm |

b) What is the recommended training zone for cardio fitness (% of HR max)?

- |                                 |                                  |
|---------------------------------|----------------------------------|
| <input type="checkbox"/> 20–40% | <input type="checkbox"/> 40–60%  |
| <input type="checkbox"/> 60–85% | <input type="checkbox"/> 85–100% |

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c) Work out Mohammed's target zone for improving cardiovascular fitness.

to

bpm

Show your answer

9. The Jackson-Pollock nomogram method requires three skinfold measurements.

a) Which three skinfold measurements are used for Mohammed?

Tick three boxes.

suprailiac

thigh

chest

abdominal

triceps

biceps

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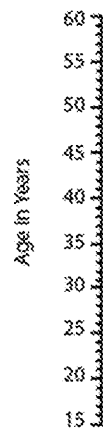


Jasmine is 22 years old and her sum of three skinfolds is 5

b) Estimate Jasmine's body fat percentage using the r

Write your answer in the box.

%



c) Explain why it is important to know how to use skin and carefully.

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10. Ben is going to use free weights to develop his muscular strength. He has never lifted weights before.

a) Explain why Ben should learn weightlifting technique from a personal trainer/instructor.

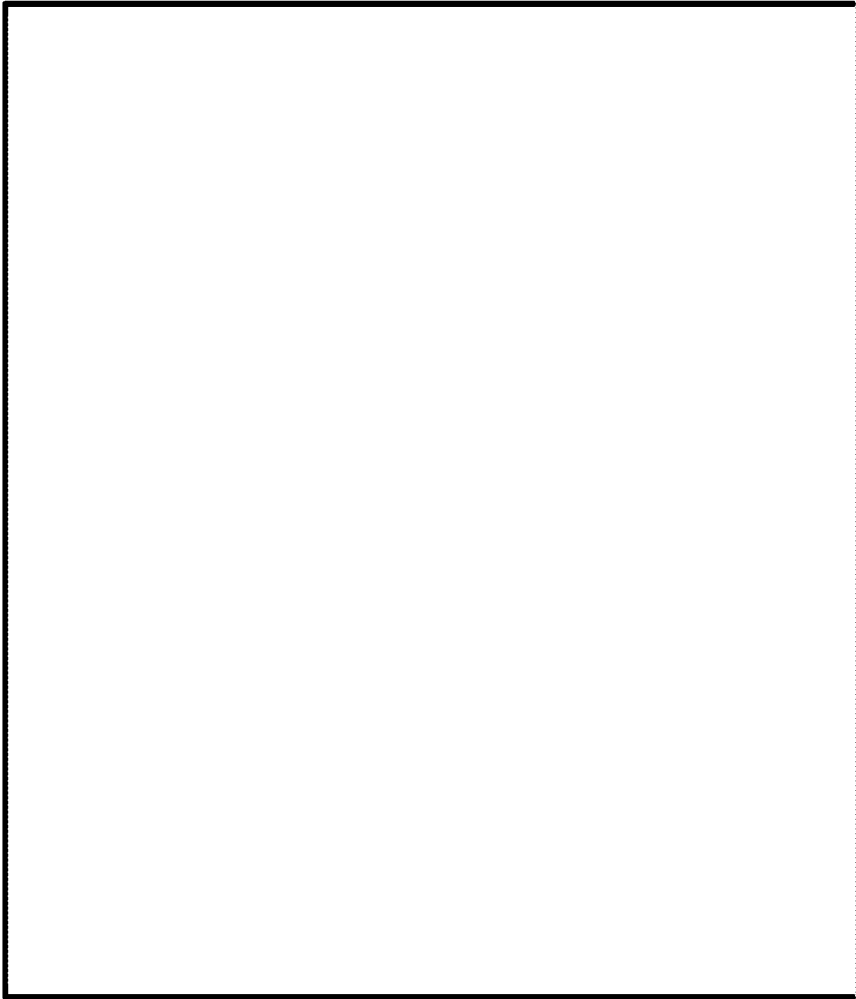
Ben wants to determine his muscular strength. His personal trainer is going to instruct him through a fitness test.

b) Identify one pre-test procedure a personal trainer would use when directing a client to perform a fitness test and explain why it is important.

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11. Tara is a sprinter and would like to measure her speed. Explain which could be set up to determine her speed and explain. What additional information or requirements should be considered for the test?



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*Unit 1: Fitness for Sport and Exercise*

**Practice Assessment 2**

**Time allowed:** 1 hour

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1. Free weights can be used to develop muscular strength, muscular endurance, and elastic strength.

a) Tick the repetitions to match the goal of the long jumper

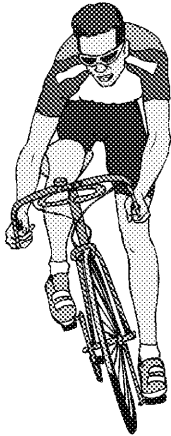


Goal: **elastic strength**

Weight: 75% of 1RP

Repetitions:

b) Tick the repetitions to match the goal of the cyclist

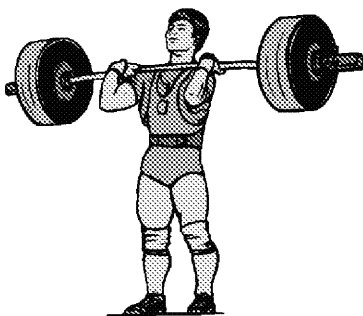


Goal: **muscular endurance**

Weight: 50–60% of 1RP

Repetitions:

c) Tick the repetitions to match the goal of the powerlifter



Goal: **muscular strength**

Weight: 90% of 1RP

Repetitions:

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2. To prepare for a competition, Sarah increases the number of runs she does per week and also increases the duration of her training sessions to 1.5 hours each.

a) Which two principles of fitness has she applied?

frequency

time

type

intensity

3. Kyle does weight training to improve his muscular strength by alternating between doing upper-body workouts and lower-body workouts.

a) Explain why athletes alternate upper-body workouts and lower-body workouts instead of exercising the whole body during a single session.

4. This runner stretches her quadriceps, holding the position for 30 seconds.

a) What is the name of this type of stretch?

ballistic

PNF technique

static

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5. Daichi has cut down on his training and has noticed his muscle mass decreasing.

a) Which principle of training explains why Daichi's muscle mass decreased?

progressive overload

specificity

intensity

reversibility

Daichi introduces new exercise methods into his training to make it more interesting and enjoyable.

b) Which principle of training has Daichi applied?

variation

specificity

progressive overload

frequency

6. Basketball is a sport which requires several different physical fitness components.

a) Which skill-related fitness component allows the player to quickly and accurately change direction at speed while maintaining balance?

agility

coordination

reaction time

power

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b) Which skill-related fitness component allows the b accurately move his hands and feet simultaneously efficiently?

agility

coordination

reaction time

power

7. Toby wants to improve his running speed. He performs s in-between.

a) What is the name of this speed training method?

interval training

hollow sprints

acceleration sprints

b) Which test could Toby do to determine his speed?

Write your answer in the box.

8. Muscular strength is an important component of strength strength can be used as a measure of strength.

a) Which piece of equipment is used to measure grip

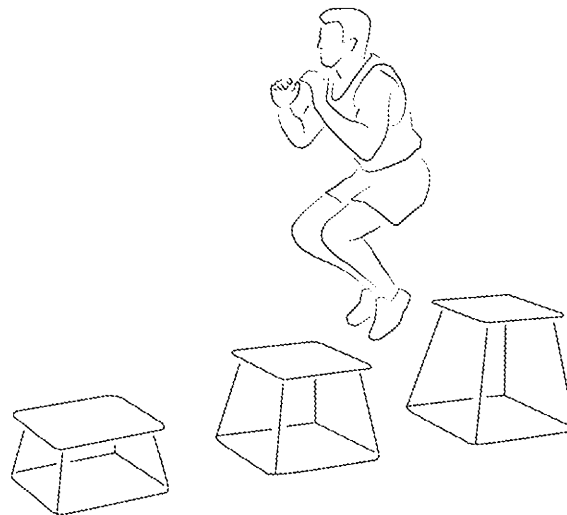
Write your answer in the box.

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b) State one disadvantage of this fitness testing method

9. Figure A shows an athlete performing a kind of exercise of sports-specific power and strength.



a) What is the name of this type of training?

circuit training

free weight

fartlek training

plyometric

b) Which fitness test can be used to measure anaerobic power?

sit-and-reach test

vertical-jump

BIA testing

multistage

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10. Alisha scores poorly in a test which determines aerobic fitness.

a) Suggest two training methods Alisha could undertake to improve her aerobic fitness.

and

b) At what intensity (percentage of HR max) should Alisha train to develop cardiorespiratory fitness?

- |                                 |                                  |
|---------------------------------|----------------------------------|
| <input type="checkbox"/> 20–45% | <input type="checkbox"/> 45–60%  |
| <input type="checkbox"/> 60–85% | <input type="checkbox"/> 85–100% |

11. A football coach carries out various fitness tests on his team. Compared to the rest of the team members, the goalkeeper's *endurance* is poor, but the coach is *not* concerned.

a) Explain why the coach is not concerned that the goalkeeper's endurance is poor.

b) Identify the skill-related fitness component which is most important for allowing the goalkeeper to respond to the visual cue towards the goal and to initiate a response in order to intercept it.

- |                                  |  |
|----------------------------------|--|
| <input type="checkbox"/> agility | <input type="checkbox"/> coordination  |
| <input type="checkbox"/> power   | <input type="checkbox"/> reaction time |

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12. Jean wants to assess her body composition. She has a tape scales, but no other equipment to use.

a) Which method of body composition assessment could she use?

- bioelectrical impedance analysis (BIA)
- body mass index (BMI)
- skinfold testing

b) Describe the main limitation of this method of assessment and explain why it is a problem.

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13. Some students are assessing their running speed on the c  
rain while they are doing it. The pitch becomes slippery, n  
students to run without slipping. Also, their record sheet  
starts to run, making it difficult to read the results.

a) Suggest why it would be unwise to make recomme  
results gained through this particular test.

14. Elijah wants to estimate his percentage body fat.

a) When using the Jackson-Pollock nomogram, the su  
skinfold sites is required for males?

Tick three boxes.

suprailiac	<input type="checkbox"/>	thigh	<input type="checkbox"/>	chest	<input type="checkbox"/>
abdominal	<input type="checkbox"/>	triceps	<input type="checkbox"/>	b	<input type="checkbox"/>

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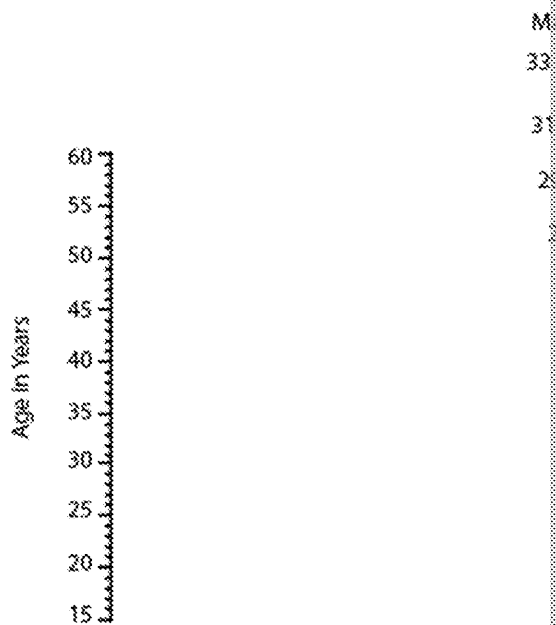


Elijah's sum of three skinfolds is 53 mm and he is 27 years

b) Using the nomogram, work out Elijah's estimated body fat percentage.

Write your answer in the box below.

%



c) Describe one disadvantage of skinfold testing.

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15. Carmela is a 17-year-old female. She performs the Illinois

Table A<sup>2</sup>

Gender	Excellent*	Above Average*	Average*	Below Average*
Male	<15.2	15.2–16.1	16.2–18.1	18.2–21.7
Female	<17	17–17.9	18–21.7	21.8–24.7

\*(values in seconds)

- a) Using the normative data table above, rate Carmela's performance.

- b) Explain one way in which Carmela's test result could be improved.

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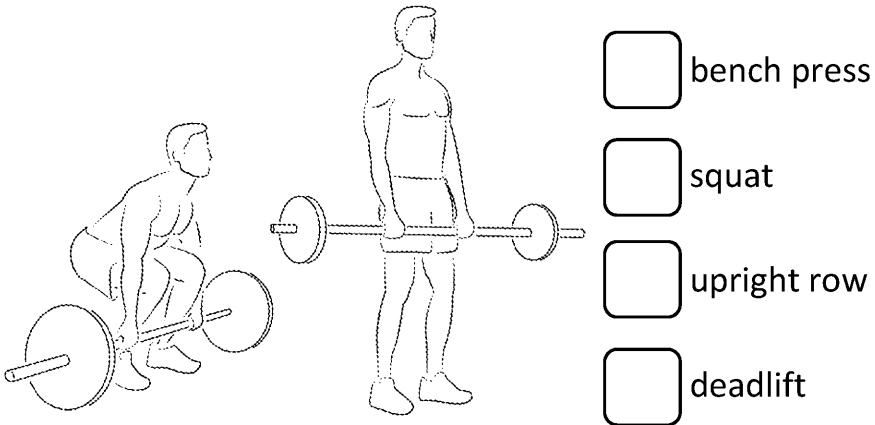


<sup>2</sup> Values from: <http://www.brianmac.co.uk/illinois.htm>



16. Free weights can be used to develop muscular strength.

a) Identify the exercise being performed in the picture

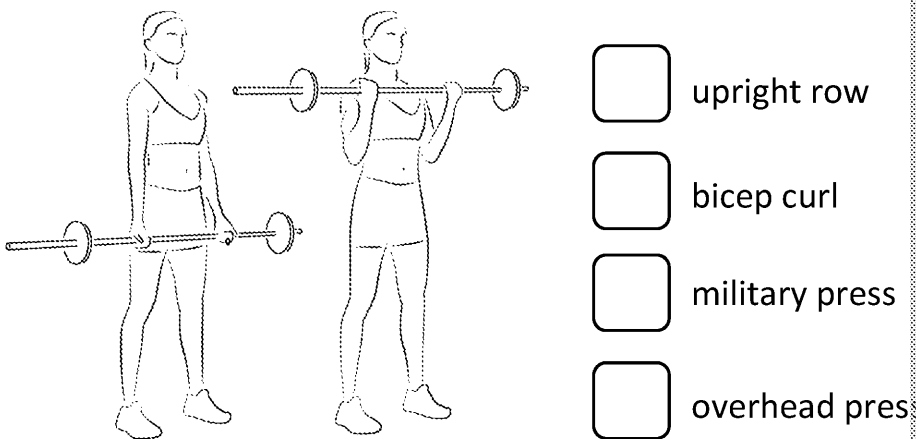


bench press

squat

upright row

deadlift



upright row

bicep curl

military press

overhead press

The order of exercises is important when doing free weights

b) Which exercise should be performed first?

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17. Sam is a personal trainer and has just gained two new clients.

The first client hasn't exercised in a long time and wants to lose weight and alter his body composition to become leaner, for aesthetic reasons.

The second client is an experienced athlete who wants to improve her performance and enhance her sporting performance.

a) Which principle of fitness refers to the way in which different training programmes which are appropriate are designed to take into account their unique requirements and personal characteristics?

specificity

progressive

adaptation

individuality

The personal trainer wants to ensure that the training programme for the athlete is appropriate for the sport which they participate in.

b) Which principle of fitness refers to the way in which training is tailored to the sport that the individual does?

specificity

progressive

adaptation

individuality

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18. Ahmed has chosen to start circuit training in order to develop strength for rugby. Explain the advantages of choosing circuit training to using resistance machines. How can Ahmed apply the concept of overload to his training?

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*Supporting*  
**Edexcel BTEC First in Sport**

*Unit 1: Fitness for Sport and Exercise*

**Practice Assessment 3**

**Time allowed:** 1 hour

The total mark for this paper is 50.

Do not open this booklet until you are told to do so.

**Information to candidates:**

- Write your answers in the spaces provided.
- Answer **all** questions.

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1. There are several components of physical and skill-related fitness.

a) Write down the correct components of fitness next to the definitions, choosing words from the boxes below.

the maximum force a muscle can exert

the ability to lift a mass above the head

the quickness to start to run a certain distance

the time taken to respond to a stimulus

muscular endurance

muscular strength

reaction time

balance

2. Max enjoys training with free weights. His coach suggests different exercises in order to develop his aerobic endurance.

a) Which principle of fitness has Max's coach applied?

frequency

intensity

time

type

b) What is the recommended training zone for developing aerobic endurance?

to

(% of HR max)

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3. Athletes must have adequate rest time between training prevent injury or exhaustion.

a) Which principle of fitness underpins this fact?

- specificity
- progressive
- adaptation
- rest and recovery

4. Circuit training can be used to develop different components of fitness.

a) Explain why the order of exercises is important during circuit training.

5. Jeremy is a kick-boxer. He wants to develop his **anaerobic power**.

a) Which fitness test could Jeremy perform to measure his anaerobic power? (1)

- sit-and-reach test
- vertical-jump test
- multistage-fitness test
- grip-dynamometer

Jeremy does exercises such as box jumps and incline press to develop explosive power.

b) What is the name of this type of training method?

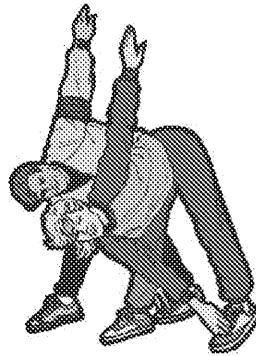
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6. These athletes perform a type of stretch which involves f...  
They swing from side to side, touching their toes.

a) What is the name of this type of stretch?

- static
- ballistic
- PNF technique



A different type of stretching involves performing a static isometric contraction, followed by another static stretch. This technique inhibits the stretch reflex, allowing the athlete to perform...

b) What is the name of this type of stretch?

- static
- ballistic
- PNF technique

These stretches help to improve flexibility.

c) Which fitness test could be used to determine flexibility?

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7. Karam performs the forestry step test.

a) Which component of fitness is this test used to measure?

muscular endurance

aerobic endurance

strength

agility

b) Name one other test which could be used to measure the same component of fitness.

8. Geeta is 16 years old.

a) Calculate her HR max.

In order to develop cardiorespiratory health and fitness, Geeta should train in the **aerobic training zone**.

b) Calculate Geeta's lower and upper limits for heart rate training to develop aerobic endurance.

Lower heart rate training zone =  bpm

Upper heart rate training zone =  bpm

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9. The **Borg (RPE) scale** can be used to determine exercise

6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

a) Write the label in the correct place

somewhat hard

maximal exertion

no exertion at all

b) What does RPE stand for?

c) If a person gave an RPE of 9, what would you predict to be?

 bpm

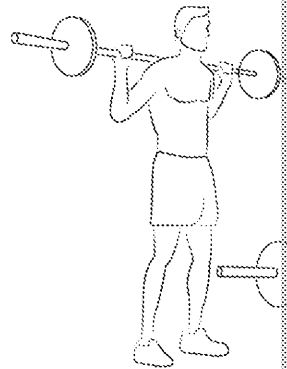
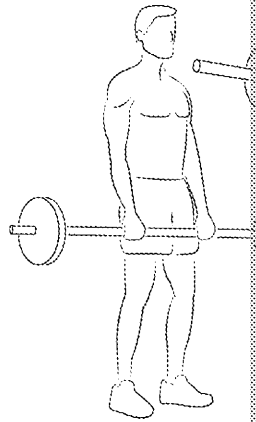
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10. Free weights can be used to perform many different exercises.

b) Name the barbell exercises being performed below.



a) When using free weights, individuals can gradually increase the weight they use, causing adaptation and leading to improved performance. Which principle of training is this an example of?

specificity

progressive

variation

frequency

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11. Different sports require different fitness components.

a) Identify the fitness component which allows the gymnast to perform a handstand, maintaining centre of mass above the base of support.



- power
- agility
- balance
- muscular endurance

b) Identify the fitness component which enables the judo practitioner to throw his heavy opponent.



- muscular endurance
- balance
- aerobic endurance
- muscular strength

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12. Dobry regularly does **fartlek training**.

a) Which of the following best describes this training

- continuous running at a steady, moderate pace
- continuous running with varied intensity
- running periods followed by rest periods
- working around a circuit of different exercise

b) Which component of physical fitness does fartlek training develop?

13. Sandra and her classmates take turns to perform the one minute test to measure muscular endurance.

They compare their scores to normative data tables.

a) How else could the students interpret their scores?

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Sandra was disappointed to score poorly on the test. She followed a programme of muscular-endurance training using free weights.

b) Tick the correct intensity (% of 1RM) and repetition range for muscular endurance.

- Intensity:
- 50–60%
  - 75%
  - 90%

- Repetitions:
- 6
  - 12
  - 20

14. BIA can be used to measure body composition.

a) What does BIA stand for?

B

I

A

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This method of measuring body composition requires electrical current to pass through the body.

b) Explain how this method of measuring body composition works.

c) Suggest one advantage of using BIA to estimate body composition.

15. Henry performed a fitness test to determine strength. His muscular strength was poor.

a) Suggest a fitness training method that could help improve muscular strength.

b) Which fitness test can be used to measure muscular strength?

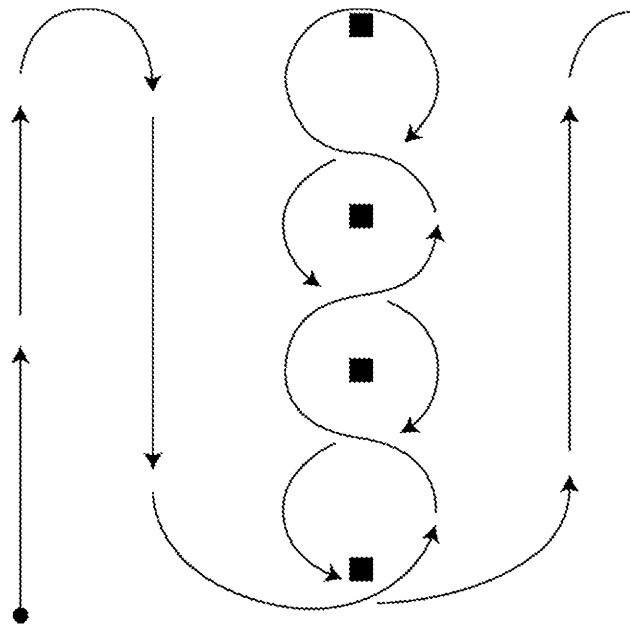
- |  |                                       |
|--|---------------------------------------|
| <input type="checkbox"/> grip-dynamometer test   | <input type="checkbox"/> Illinois run |
| <input type="checkbox"/> multistage-fitness test | <input type="checkbox"/> BMI          |

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16. This diagram shows the set-up of a fitness test used to measure



a) What is the name of this fitness test?

17. Holly does sprint training to develop her running speed. She uses two training methods.

The first method involves starting from a standing start, increasing speed to a maximal sprint.

a) What is the name of this type of speed training?

interval sprints    
  hollow sprints    

The second method involves sprinting for 60 metres, the rest period, and then repeating this cycle several times.

b) What is the name of this type of speed training?

interval sprints    
  hollow sprints    

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18. Joanne is a good standard school runner, who competes in 100m and 200m. Joanne would like to enter a 10 km running event for charity. She needs to develop her aerobic endurance. Choose a suitable training method for Joanne to develop her aerobic endurance, explain what it involves and discuss its advantages and disadvantages. (8)

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## Practice Assessment 1

1. a) flexibility  
b) The correct order is:
  1. PNF technique
  2. ballistic
  3. staticc) sit-and-reach test
  
2. a) Circuit training  
b) Any two of the following points:
  - increase the number of workstations (e.g. from 5 to 8)
  - increase the time spent at each workstation (e.g. from 1 minute to 1.5 minutes)
  - decrease the rest periods (e.g. from 30 seconds to 15 seconds)
  - increase the number of times the whole circuit is completed (e.g. from 2 to 3)
  
3. a) 19 (1 mark awarded for showing  $1.9^2$ , 1 mark awarded for showing  $68/(1.9)^2$ , 1 mark awarded for showing  $23.24$ )  
b) underweight  
c) Antonio  
d) Any one of the following:
  - calibrate the scales
  - gain informed consent
  
4. a) agility  
b) average
  
5. a) reaction time  
b) balance  
c) power
  
6. a) upright row  
bench press  
b) The answers should appear in this order, from top to bottom:  
90%  
75%  
50–60%
  
7. a) Any two of the following points:
  - core exercises work large muscles or muscle groups, while assistance exercises work smaller muscle groups
  - core exercises help stabilise the spine and pelvis; assistance exercises target specific muscle groups
  - core exercises involve movement at two or more primary joints, while assistance exercises involve movement at only one primary jointb)
  - to ensure different muscle groups are used
  - this makes the workout as effective as possible
  
8. a) 202 bpm  
b) 60–85%  
c) 121 to 172 bpm (1 mark for calculating 60% of 202, 1 mark for calculating 85% of 202)

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9. a) thigh  
abdominal  
chest  
b) 22%  
c) Any two of the following points:
- so that the person being tested is not hurt
  - to ensure that the measurements taken are accurate and reliable
  - to ensure that the equipment is not damaged
10. a) Any one of the following points:
- to ensure he knows what to do and uses the correct technique
  - to prevent accidents or injury
  - to ensure training is effective and safe
- b) Any one of the following points with a correct explanation:
- get Ben to sign an informed consent form – to ensure the client understands risks involved
  - get Ben to fill in a health questionnaire – to safely select appropriate tests
  - calibrate equipment – to ensure results are accurate and reliable
  - select the appropriate test – test must be appropriate to the fitness component to develop
11. Award 1 mark for each of the following points:
- simple 35 m sprint test
  - explanation needs to be given of how a 35 m track can be marked out and sprint the length of the track
  - the test should be repeated three times (with adequate rest periods) and (reliability)
- Advantages include (max 3 marks):**
- it is easy to set up in a small space, with minimum equipment (stopwatch)
  - may be performed indoors, or on outdoor space (as long as test is repeated)
  - results can be interpreted by comparing results to published data or previous test
  - test can be repeated three times and an average taken to ensure reliability
- Pre-test procedures include (max 3 marks):**
- obtaining informed consent for participant
  - ensuring suitability of test for given participant (health questionnaire)
  - calibration of equipment
  - ensuring tester is knowledgeable of test procedure, so that accurate measurements results may take place

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## Practice Assessment 2

1. a) 12  
b) 20  
c) 6
2. a) frequency  
time
3. a) Any two of the following points:
  - ensures that all of the muscles are worked
  - prevents the whole body from becoming fatigued
  - allows the individual to train again sooner
  - for rest and recovery of muscles
  - for adaptations to occur
4. a) static
5. a) reversibility  
b) variation
6. a) agility  
b) coordination
7. a) hollow sprints  
b) 35 metre sprint
8. a) grip-dynamometer test  
b) Any one of the following points:
  - requires expensive equipment
  - grip strength may not correlate with strength in other parts of the body
9. a) plyometrics  
b) vertical-jump test
10. a) Any two of the following:
  - continuous training
  - fartlek training
  - interval training
  - circuit trainingb) 60–85%
11. a) Aerobic endurance does not significantly affect a goalkeeper's ability to perform (Reaction time, agility and coordination are far more important for a goalkeeper.  
b) reaction time
12. a) body mass index  
  
b) BMI does not take into account the difference between fat mass and muscle mass wrongly categorise people as overweight or underweight (1).

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13. a) Award 1 mark for each point made:
- The measurements taken may not reflect the performer's true ability because they were slipping.
  - The measurements obtained taken may not be accurate as the rain damaged the equipment.
  - The results obtained are not reliable.
  - It is not wise to make recommendations based upon results which are unreliable.
14. a) thigh  
chest  
abdominal  
b) 16%  
c) Any one of the following points:
- may be intrusive on the person being tested, particularly in front of other people
  - a male tester may feel uncomfortable testing a female and vice versa
  - it requires specialist knowledge – tester needs to be proficient at using the correct site of an individual; otherwise the wrong measurement may be taken
  - requires specialist equipment
15. a) below average  
b) Award 1 mark given for any of the following points:
- determine baseline levels for monitoring and improving performance
  - aids the development of suitable training programmes
  - monitor if training programmes are effective
  - set targets for improvement
16. a) deadlift  
bicep curl  
b) core exercises
17. a) individual needs/differences  
b) specificity
18. Award 1 mark for any of the following points:
- Advantages of circuit training (max 3 marks):**
- the exercise is varied and interesting
  - does not require expensive kit
  - may be adapted to suit rugby (specificity)
- Disadvantages of resistance machines (max 3 marks):**
- requires expensive equipment and may cause injury if the incorrect technique is used
  - some machines are not easily adjusted to suit the individual size of athletes
  - in order for training to be progressed, training needs to be demanding enough to be improving performance
- Progressive overload may be applied to circuit training by (max 3 marks):**
- increasing the weight lifted (by 2 kg)
  - reducing the rest intervals, e.g. from 30 seconds to 10 seconds
  - increasing the time spent at each station, e.g. 1 minute to 90 seconds
  - increasing the number of times the circuit is completed, e.g. from one to two times

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## Practice Assessment 3

1. a) muscular strength  
balance  
speed  
reaction time
2. a) type  
b) 60–85% of HR max
3. a) rest and recovery
4. a) Any one of the following:
  - helps to avoid muscle fatigue
  - improves training/performance
  - helps avoid injury
5. a) vertical-jump test  
b) plyometrics
6. a) ballistic  
b) PNF technique  
c) sit-and-reach test
7. a) aerobic endurance  
b) multistage-fitness test
8. a)  $220 - 16 = 204$  bpm  
b) 122, 173
9. a) no exertion at all  
somewhat hard  
maximal exertion  
b) rate of perceived exertion  
c) 90 bpm
10. a) upright row  
squat  
b) progressive overload
11. a) balance  
b) muscular strength
12. a) continuous running with varied intensity  
b) aerobic endurance
13. a) comparing their results to their peers' scores  
b) 50–60% intensity  
20 reps
14. a) bioelectrical impedance analysis  
b) A small, safe electrical current is passed through the body from right foot and left foot. A machine/device measures the resistance (1), which along with other input, allows body fat percentage to be calculated (1).

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- c) Any one of the following:
- it is fast and simple to conduct
  - non-intrusive
  - reliable/repeatable
15. a) free weights / variable resistance training (accept circuit training)  
b) grip strength (dynamometer)
16. a) Illinois agility run
17. a) acceleration sprints  
b) interval sprints
18. Candidate may choose one of the following four training methods. Award 2 marks for each method. Give an example.
- **Continuous training:** This form of training involves exercising at a *steady state* with no rest period. *minimum of 30 minutes*
  - For example, a person who goes jogging for 45 minutes without taking any rest.
  - Continuous training is effective, cheap and easy to perform.
  - Some people may find this form of training boring.
  - **Fartlek training:** During this form of training, exercise is also continuous but the intensity of training is *varied*.
  - The intensity of the training can be varied by speed, terrain or load.
  - Fartlek training is a more varied training method which makes it more interesting for athletes.
  - Cross-country running can be used as a form of fartlek training. The intensity is varied by different surfaces and up and down hills, varying the speed of the run throughout the session.
  - **Interval training:** During this type of training, athletes perform a work period followed by a rest period. The work period can last for various lengths of time – usually between 1 and 5 minutes depending on level of fitness. The rest period may be complete rest, jogging or walking.
  - During the work period, athletes should work at around 60% of  $VO_2$  max. As fitness improves, the rest periods should be decreased over time.
  - For example, a person jogs for three-minute work periods followed by one-minute rest periods.
  - This form of training benefits from variety to keep the athlete motivated. It can be quite exhausting and athletes may find it hard to train alone.
  - **Circuit training:** In order to develop aerobic fitness, the circuit should be designed to keep the body to work within the aerobic training zone and could include exercises such as step-ups and shuttle runs. The order of exercises is important to ensure all muscles are exercised in order to prevent fatigue.
  - This form of exercise is varied and interesting.
  - It does not require expensive kit.
  - The intensity of the circuit (progressive overload) can be modified in various ways by varying work and rest periods, the number of stations, the types of exercises performed and when the circuit is completed.
  - It requires sound knowledge and time to plan and set up the circuit.

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