3.11 Calculating Training Intensity and Load: Percentages, Ratios and Overload: 10-minute Pack

AQA 8582 · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer all questions. Show your working for calculation questions. Two of the questions require full sentences: the graph interpretation and the trend description. Time guidance: 10 minutes.

1 A coach records a trainee performing 12 repetitions of an exercise in one set. Which of the following is closest to the trainee performing one extra repetition as a percentage increase in repetitions?

- ☐ A) 6%
- ☐ B) 8%
- ☐ C) 10%
- ☐ D) 12%

(Total for Question 1 is 1 mark)

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2 State the term used for increasing a training variable, for example distance or repetitions, by a small amount each week to promote adaptation in progressive overload context.

(Total for Question 2 is 1 mark)

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3 A coach records sprint distances of 30 m, 40 m and 50 m in a session. State the range of these distances in metres.

(Total for Question 3 is 1 mark)

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4 In an interval training session a coach prescribes work to rest ratio 1:3 for a cycling drill lasting 40 seconds per work bout. State how many seconds of rest to take between each work bout.

(Total for Question 4 is 1 mark)

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5 Table: A coach records three training sessions of a rower in one week. Complete the table to find totals. Sessions: Session 1 distance 6 km, Session 2 distance 7.5 km, Session 3 distance 8 km. Fill in total distance for the week and total number of sessions.

(Total for Question 5 is 3 marks)

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6 A circuit session includes 5 exercises. The athlete does 3 sets of each exercise, with 10 repetitions per set. Calculate the total number of repetitions performed in the whole circuit. Show working.

(Total for Question 6 is 1 mark)

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7 A runner increases their weekly distance from 20 km to 22 km to apply overload. Calculate the percentage increase in weekly distance. Give your answer to 1 decimal place and show working.

(Total for Question 7 is 2 marks)

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8 A gymnast completes 30 repetitions total across several practice sets. The coach asks for a 20% increase in total repetitions next session. Calculate the target total repetitions for the next session. Show working.

(Total for Question 8 is 2 marks)

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Mark scheme · 3.11 Calculating Training Intensity and Load: Percentages, Ratios and Overload: 10-minute Pack

Question 1

B **B1**

Answer: B (8%)

Question 2

progressive overload **B1**

Answer: Progressive overload

Question 3

20 m **B1**

Answer: 20 m

Question 4

120 seconds **B1**

Answer: 120 seconds

Question 5

method: add distances 6 + 7.5 + 8 **M1**

final answer: total distance 21.5 km **A1**

final answer: total sessions 3 **A1**

Answer: Total distance = 21.5 km. Total sessions = 3.

Question 6

total reps = 5 exercises x 3 sets x 10 reps = 150 **B1**

Answer: 150 repetitions

Question 7

method: calculate increase 22-20 = 2 km and divide by original 20, 2/20 **M1**

final answer: 10.0% **A1**

Answer: 10.0%

Question 8

method: calculate 20% of 30 = 0.20 x 30 **M1**

final answer: 36 repetitions **A1**

Answer: 36 repetitions

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