

Y12 Induction Work – Level 3 Sport

Muscular System

Task 1: Answer the following questions.

1. Approximately how many muscles are there in the human body?

2. What percentage of body mass does muscle make up of your body?

Task 2: Complete the table below about the 3 different types of muscle.

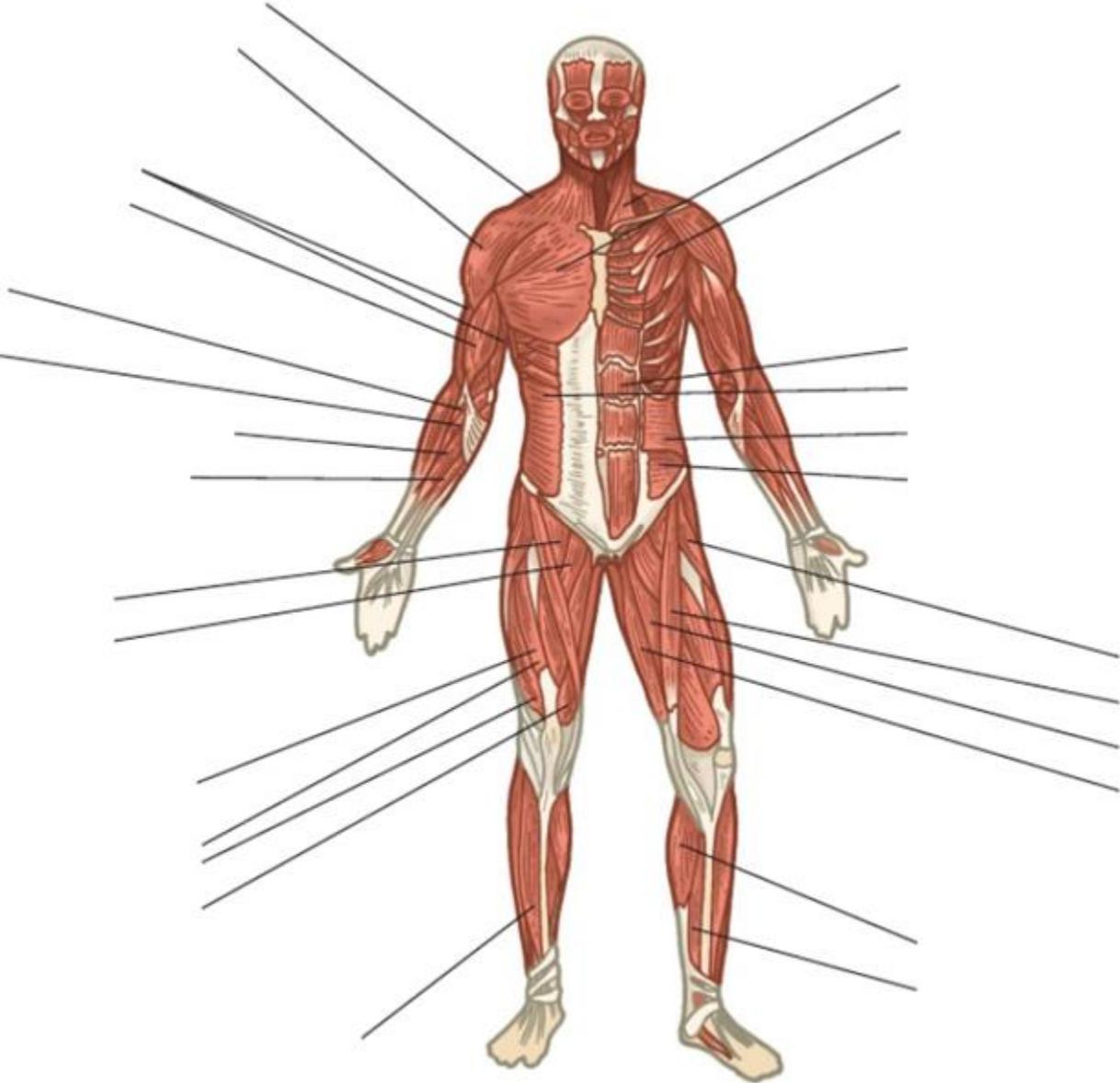
Type of Muscle	Characteristics	Examples
1.		
2.		
3.		

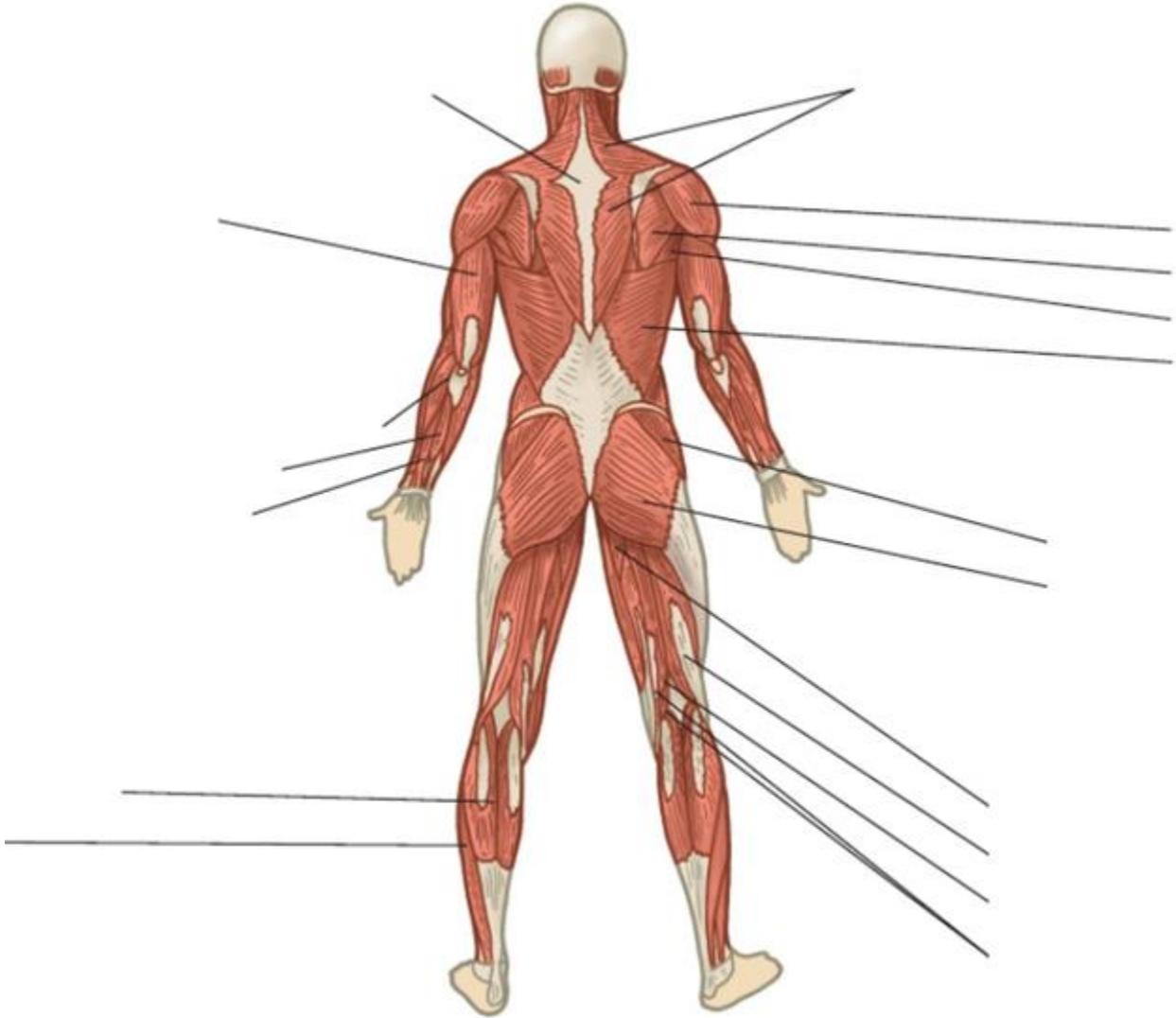
What is the difference between voluntary and involuntary muscles?

Task 3: Label the two diagrams on the following pages using the checklist below.

		Complete
Major Skeletal Muscles:	Deltoids	
	Biceps	
	Triceps	
	Wrist Flexors	
	Wrist Extensors	
	Supinators	
	Pronators	
	Pectorals	
	Abdominals	
	Obliques	
	Quadriceps	
	Hip Flexors	
	Tibialis Anterior	
	Erector Spinae	
	Trapezius	
	Quadriceps	
	Hip	
	Latissimus Dorsi	
	Gluteals	
	Hamstrings	
Gastrocnemius		

	Soleus	
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Task 5: What are the main functions of the muscular system?

1. _____
2. _____
3. _____
4. _____
5. _____

Task 6: Explain the following terms, providing examples for each:

Antagonistic pairs → _____

Agonist → _____

Antagonist → _____

Synergists → _____

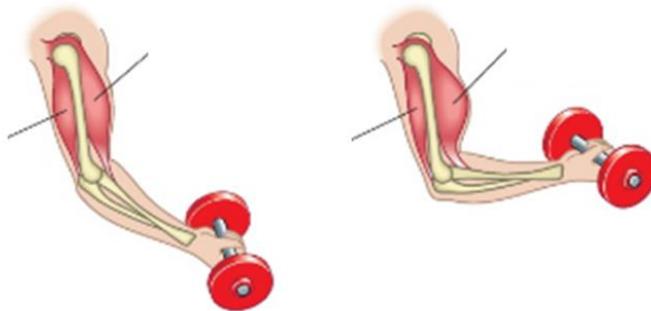
Fixator muscle → _____

Task 7: Complete the table below about the 3 different types of muscle contraction.

Type of Contraction	Characteristics	Examples
1.		

2.		
3.		

Task 8: On the diagram below, label the major muscles and explain what type of muscle contractions are happening.



Task 9: Complete the table below about the 3 different muscle fibres and the all or none law.

Fibre Type	Characteristics	Sporting Examples
1.		

2.		
3.		
All or None Law		

Task 10: What are the different **responses** of the muscular system?

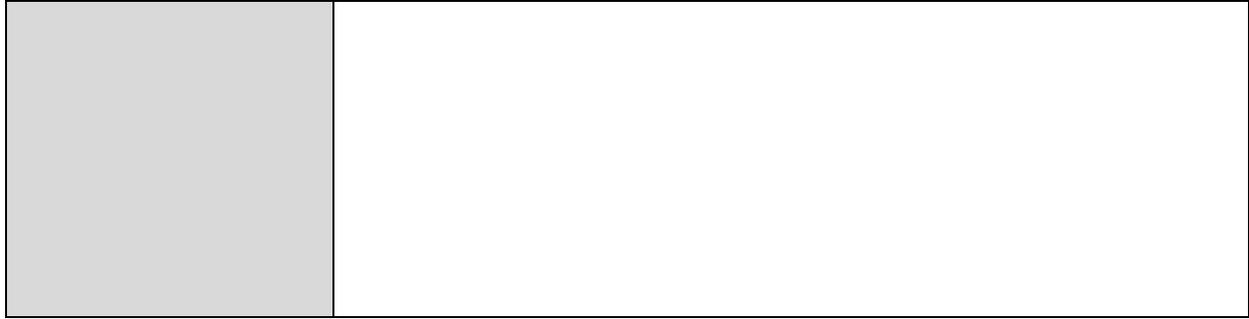
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Task 11: What are the different **adaptations** of the muscular system?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Task 12: Explain how the additional factors below are affected by the muscular system and exercise?

Age	
Cramp	



Revision Questions → Muscular System

What are the different muscle types?

List the characteristics and functions of each muscle type.

Explain the importance of the different types of muscle to sport and exercise.

Name the main skeletal muscles and describe where they are located.

Consider a sport and describe the role of the specific muscles in this sport.

Think of a sporting movement and list the pairs of muscles being used for each phase of the movement.

Can you explain the importance of different muscle contractions in sport?

Think of a press-up. Which muscles are working as antagonistic pairs in the shoulder?

What type of contraction are taking place for each phase of a press-up at the shoulder joint?

Can you explain how different muscle fibre types affect sport?

List three sports and the types of muscle fibre required for each.

Explain why your chosen sports require these types of fibre and how an athlete can improve their performance by understanding this.

What are the immediate responses your muscles make when exercising?

Why do these changes happen during exercise?

What aspects of the warm-up are used to prevent muscle injury? Why is a warm-up before exercise important to your muscles?

What long-term adaptations occur in your muscles when you exercise?

Consider the different muscle fibre types and list the exercises that could be used specifically to train them.

Explain how strength training changes the structure of the muscles and the benefits of this to sport performance.