



Free-Standing Mathematics Qualification
Advanced Level
June 2013

Using and Applying Statistics

6990/2PM

Unit 10

Preliminary Material

Data Sheet

To be opened and issued to candidates between
Monday 29 April 2013 and Monday 6 May 2013

REMINDER TO CANDIDATES

YOU MUST **NOT** BRING THIS DATA SHEET
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World athletics championships

The world athletics championships takes place every two years.

The men's 100 metres race is thought by many to be one of the track highlights. In 2009, Usain Bolt of Jamaica set the men's 100 metres race world record at 9.58 seconds.

The table below gives the winning times of the men's 100 metres race at the world athletics championships since 1991.

Year	Runner	Nationality	Time (seconds)
1991	Carl Lewis	USA	9.86
1993	Linford Christie	Great Britain	9.87
1995	Donovan Bailey	Canada	9.97
1997	Maurice Greene	USA	9.86
1999	Maurice Greene	USA	9.80
2001	Maurice Greene	USA	9.82
2003	Kim Collins	Saint Kitts and Nevis	10.07
2005	Justin Gatlin	USA	9.88
2007	Tyson Gay	USA	9.85
2009	Usain Bolt	Jamaica	9.58
2011	Yohan Blake	Jamaica	9.92

Life expectancy at birth

The World Health Organisation (WHO) collects data from countries throughout the world. These data relate to various health issues: for example, the incidence of disease. Each year, the WHO produces a report and statisticians predict future trends.

The WHO has derived estimates of life expectancy at birth for a person born in a particular country in a particular year. These estimates reflect how many years a person might be expected to live given current mortality rates within that particular country. As a result of improved medical care and living conditions, people are living longer. Therefore, governments need to plan more medical and welfare help for an ageing population.

In 2009:

- Japan and San Marino had the longest life expectancy of 83 years
- Malawi had the lowest life expectancy of 47 years
- The United Kingdom had a life expectancy of 80 years.

The WHO also produces data, using the gross national income per capita, to determine the income group of a country.

The tables below show some WHO summary statistics.

Table 1 – Life expectancy at birth (years) by world region

Region	Male			Female			Both sexes		
	2009	2000	1990	2009	2000	1990	2009	2000	1990
Africa	52	48	49	56	52	53	54	50	51
Americas	73	71	68	79	77	75	76	74	71
Eastern Mediterranean	64	62	59	67	65	63	66	64	61
Europe	71	68	68	79	76	75	75	72	71
South-East Asia	64	61	58	67	64	59	65	62	59
Western Pacific	72	70	68	77	74	71	75	72	69
Global mean life expectancy	66	64	62	71	68	66	68	66	64

Table 2 – Life expectancy at birth (years) by gross national income per capita

World Bank Income Group	Male			Female			Both sexes		
	2009	2000	1990	2009	2000	1990	2009	2000	1990
Low income	55	52	50	59	55	54	57	54	52
Lower middle income	66	63	61	69	66	64	68	65	63
Upper middle income	68	65	64	75	73	72	71	69	68
High income	77	75	72	83	81	79	80	78	76
Global mean life expectancy	66	64	62	71	68	66	68	66	64

Turn over ►

Dairy farming



Defra figures for 2010 showed that there were approximately 1.85 million dairy cows in the UK. In the five years 2005–2010, the number had fallen by 6.7% as many farmers had either given up farming or changed to a different type of farming. Dairy cows have to be milked – morning and evening – every day of the year. The work is very demanding and the price per litre of milk that the farmer receives for selling his cows' milk can go up or down.

However, the annual average milk yield per cow has increased.

The table below shows the annual average milk yield per cow and the net milk price per litre (this is the price paid to the farmer) for the period 2000–2009.

	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Average milk yield per cow (litres)	5978	6347	6495	6620	6571	6749	6977	6913	6943	7084
Net milk price (pence per litre)	16.9	19.3	17.1	18.0	18.5	18.5	17.9	20.7	25.9	23.6

Some dairy farmers do not use any chemicals such as pesticides or artificial fertilisers on their farms, and any cattle feed used must be from registered organic suppliers. Such farmers are known as organic dairy farmers. The annual average milk yield per organic dairy cow is lower than that per conventional dairy cow.

The amount of milk that a cow produces will vary according to the point in the milking cycle. The highest milk yield is obtained shortly after a cow has calved.

END OF DATA SHEET

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Life expectancy at birth: http://www.who.int/gho/publications/world_health_statistics/EN_WHS2011_Full.pdf 2011

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