New Maths GCSE: S4 - Mean from Grouped Data - Interpreting the Table

Name:... Date:.......................................

The following table shows the weight of Easter Eggs

Weight of Easter Eggs (g)				Frequency	Mid Point	Mid-Point x Freq	Cumulative Frequency
100	≤	w	<	200	18	150	2700	18
200	≤	w	<	300	16	250	4000	34
300	≤	w	<	500	10	400	4000	44
500	≤	w	<	800	12	650	7800	56
800	≤	w	<	1000	4	900	3600	60
		TOTALS			60		22100	

What does the circled number represent?

A The total number of Easter Eggs

B The total weight of the Easter Eggs

C The average weight of the Easter Eggs

D The total number of Easter Eggs that weigh more than 1000g

Correct Answer: A B C D

Explanation:

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The following table shows the weight of Easter Eggs

Weight of Easter Eggs (g)				Frequency	Mid Point	Mid-Point x Freq	Cumulative Frequency
100	≤	w	<	200	18	150	2700	18
200	≤	w	<	300	16	250	4000	34
300	≤	w	<	500	10	400	4000	44
500	≤	w	<	800	12	650	7800	56
800	≤	w	<	1000	4	900	3600	60
		TOTALS			60		22100	

What does the circled number represent?

A The total number of eggs that weigh between 300g and 500g

B The exact total weight of the 10 eggs in the 300 to 500g category

C The average weight of the Easter Eggs between 300g and 500g

D Our best estimate at the total weight of the 10 eggs in the 300 to 500g category

Correct Answer: A B C D

Explanation:

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Weight of Easter Eggs (g)				Frequency	Mid Point	Mid-Point x Freq	Cumulative Frequency
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300	≤	w	<	500	10	400	4000	44
500	≤	w	<	800	12	650	7800	56
800	≤	w	<	1000	4	900	3600	60
		TOTALS			60		22100	

What does the circled number tell you?

A The total number of eggs that weigh between 500g and 800g is 56

B The average weight of the eggs in this group was 56g

C There were 56 eggs that weighed less than 800g

D There were 56 eggs that weighed more than 800g

Correct Answer: A B C D

Explanation:

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The following table shows the weight of Easter Eggs

Weight of Easter Eggs (g)				Frequency	Mid Point	Mid-Point x Freq	Cumulative Frequency
100	≤	w	< 200	18	150	2700	18
200	≤	w	< 300	(16)	250	4000	34
300	≤	w	< 500	10	400	4000	44
500	≤	w	< 800	12	650	7800	56
800	≤	w	< 1000	4	900	3600	60
TOTALS				60		22100	

What does the circled number represent?

A The total number of eggs that weigh between 200g and 300g

B The total weight of the eggs in the 200 to 300g category

C The average weight of the Easter Eggs between 200g and 300g

D The number of eggs that weighed less than 300g

Correct Answer: A B C D

Explanation:

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The following table shows the weight of Easter Eggs

Weight of Easter Eggs (g)				Frequency	Mid Point	Mid-Point x Freq	Cumulative Frequency
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200	≤	w	< 300	16	250	4000	34
300	≤	w	< 500	10	400	4000	44
(500)	≤	w	< 800	12	650	7800	56
800	≤	w	< 1000	4	900	3600	60
TOTALS				60		22100	

What does the circled number represent?

A The total number of eggs in this group

B The lower bound for the weight of eggs in this group

C The smallest number of eggs in this group

D The number of eggs that weighed less than 800g

Correct Answer: A B C D

Explanation:

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The following table shows the weight of Easter Eggs

Weight of Easter Eggs (g)				Frequency	Mid Point	Mid-Point x Freq	Cumulative Frequency
100	≤	w	< 200	18	150	(2700)	18
200	≤	w	< 300	16	250	4000	34
300	≤	w	< 500	10	400	4000	44
500	≤	w	< 800	12	650	7800	56
800	≤	w	< 1000	4	900	3600	60
TOTALS				60		22100	

What does the circled number represent?

A Our best estimate at the total weight of the 18 eggs in the 100 to 200g category

B The average weight of the Easter Eggs between 100g and 200g

C The exact total weight of the 18 eggs in the 100 to 200g category

D The total number of eggs that weigh between 100g and 200g

Correct Answer: A B C D

Explanation:

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The following table shows the weight of Easter Eggs

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200	≤	w	< 300	16	250	4000	(34)
300	≤	w	< 500	10	400	4000	44
500	≤	w	< 800	12	650	7800	56
800	≤	w	< 1000	4	900	3600	60
TOTALS				60		22100	

What does the circled number tell you?

A There were 34 eggs that weighed more than 200g

B There were 34 eggs that weighed between 200g and 300g

C There were 34 eggs that weighed less than 300g

D The average weight of the eggs in this group was 34g

Correct Answer: A B C D

Explanation:

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The following table shows the weight of Easter Eggs

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500	≤	w	<	800	12	650	7800	56
800	≤	w	<	1000	4	900	3600	60
TOTALS				60		(22100)	

What does the circled number represent?

A Our best estimate for the total weight of all the Easter Eggs

B The total number of Easter Eggs

C The exact total weight of all the Easter Eggs

D The weight of all the Easter Eggs that weighed more than 1000g

Correct Answer: A B C D

Explanation:

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The following table shows the weight of Easter Eggs

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TOTALS				60		22100	

Which calculation would give you the estimate for the mean weight?

A $60 \div 22100$

B $22100 \div 60$

C $60 \div 5$

D $22100 \div 5$

Correct Answer: A B C D

Explanation:

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800	≤	w	<	1000	4	900	3600	60
TOTALS				60		22100	

Why can we only calculate an **estimate** for the mean weight?

A There are not enough Easter Eggs

B We don't know how many Easter Eggs there are

C We would need to round our answer

D We don't know the individual weights of the Easter Eggs

Correct Answer: A B C D

Explanation:

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