**All your answers and workings must be in standard form**..

Q1 EastEnderstm had about 3500 episodes in the U K by 2001. Each episode is about 20 minutes. Each minute about 25 words are spoken. In **total** how many words have been spoken in it?

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| --- | --- |
| **Answer (standard form)** | **Write Workings Here** |
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Q2 All of EastEnderstm has been translated in Japanese. About 10 per cent fewer words are spoken in Japanese than in English. In **total** how many words are in the Japanese version?

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| **Answer (standard form)** | **Write Workings Here** |
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The speed of light is 3.0 x 105 kilometres per second. There are 3.2 x 107  seconds in a year Q3 How far does light travel in a year?

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| --- | --- |
| Answer **(standard form)** | **Write Workings Here** |
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Q4 How far in kilometres does light travel in 75 years?

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| --- | --- |
| **Answer (standard form)** | **Write Workings Here** |
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Warp Factor 10 is 2 (10-1) times the speed of light.

Q5 How many times faster than the speed of light is warp factor 10?

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| **Answer (standard form)** | **Write Workings Here** |
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The Voyagertm will take 75 years at warp factor 10 to return from the Delta Quadranttm

Q6 How far away is Voyagertm in kilometers? Hint use answers to Q’s 4 and 5.

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| --- | --- |
| **Answer (standard form)** | **Write Workings Here** |
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Q7 An individual optical cable strand has as an area of 2.25 x 10 **-**12 square meters.

If the area of the **whole** of the cable is 4.5 x 10 **-**5 square meters.

How many individual strands are there in one cable?

|  |  |
| --- | --- |
| **Answer (standard form)** | **Write Workings Here** |
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