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| **Practical Standard Form** |
| **(a)** | **(b)** | **(c)** |
| The table shows the diameter of some planets in the solar system. | The table shows the populations of some European countries. | The table shows the areas in square kilometres of four Asian countries. |
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| **Planet** | **Diameter (km)** |
| Earth | $$1.3×10^{4}$$ |
| Mercury | $$4.8×10^{3}$$ |
| Neptune | $$4.9×10^{4}$$ |
| Saturn | $$1.2×10^{5}$$ |

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| **Country** | **Population** |
| Belgium | $$1.16×10^{7}$$ |
| Estonia | $$1.33×10^{6}$$ |
| Iceland | $$3.41×10^{5}$$ |
| Russia | $$1.46×10^{8}$$ |

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| **Country** | **Area (km2)** |
| China | $$9.6×10^{6}$$ |
| Hong Kong | $$1.11×10^{3}$$ |
| Japan | $$3.78×10^{5}$$ |
| Pakistan | $$7.96×10^{5}$$ |

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| (i) Calculate the difference, in km, between the diameter of Earth and the diameter of Saturn. Give your answer in standard form. | (i) Calculate the total population of these four countries. Give your answer in standard form to 3 significant figures. | (i) Calculate the total area of China, Japan and Hong Kong. Give your answer in standard form to 3 significant figures. |
| (ii) The diameter of Neptune is $k$ times bigger than the diameter of Mercury. Find the value of $k $to 1 decimal place.  | (ii) How many more people live in Estonia than live in Iceland? Give your answer in standard form. | (ii) Calculate the difference in area between China and Pakistan. Give your answer in standard form. |
| (iii) Find the ratio of the diameter of Saturn to the diameter of Mercury in the form $n :1$ | (iii) Calculate the ratio of the population of Belgium to the population of Russia. Give your answer in the form $1 :n$, where $n$ is rounded to 1 decimal place. | (iii) The population of Hong Kong is $7.48 million$. Find the population density of Hong Kong to the nearest integer, where:$$Population density=Population÷Area$$ |