

Number Systems Revision Questions

1. HCF

e.g. a , b and c are natural numbers. If $\text{HCF}(a, b)$ stands for the highest common factor of a and b , and

$$\text{HCF}(a, b) = 15$$

$$\text{HCF}(a, c) = 20$$

what is the least possible value of

$$\text{HCF}(b, c) ?$$

Explain your reasoning.

2. LCM

e.g. if the lowest common multiple of 6, 7 and k is 84, list the possible values of k .

Number Systems Revision Questions

3. Constructing roots

e.g. given a line segment of length 1 unit, show how to construct a line segment of length $\sqrt{3}$, using only a straight edge and a compass.

4. Scientific notation

e.g. The distance from earth to the Andromeda galaxy is approximately 2 million light years, and a light year is approximately 9.47×10^{12} km.

- (i) Express the distance from earth to Andromeda in kilometres in scientific notation.
- (ii) In the future, a new spaceship is capable of travelling at 4×10^8 km/h. How long would it take this spaceship to reach Andromeda from earth?

Number Systems Revision Questions

	<p>5. Prove that $\sqrt{2}$ is not rational</p>
--	--

--	--