1 List all the factors of 68.

2 What is the HCF of 144 and 228

3 Light A blinks every 6.4 seconds. Light B blinks every 11.2 seconds. If both lights blink at the same time, after how long do they blink again at the same time?

4 Round 413.6271 to the nearest hundredth.

5 In the number 841.376, what is the value of the seven?

6 Round 5.91633 to one significant figure.

7 Round 0.003472 to two significant figures.

8 Truncate 0.03263 to the nearest thousandth.

9 G is rounded to the nearest hundredth. It rounds to 87.369. Write down the error interval of G.

10 Find the value of $\frac{9^5 - 6^6}{11^3}$. Give your answer as a number.

11 Find the value of $\frac{343^5 \times 16807^5 \times 2401^7}{117649^{17}}$. Give your answer in index form.

12 Factorise $35a^3b^5c^2 + 42a^4b^2c^4$ fully.

13 Expand and simplify $9xy^2(7x^3 + 5y + 8) - 6x^2y^2(6x^2 + y^2 - 8)$

14 Expand $(9x - 5)(8x + 7)(2x - 3)$

15 Factorise and solve $28x^2 - 18x - 16 = 0$

16 Write $x^2 + 12x - 58$ in completed square format.

17 Factorise $\frac{16}{81}x^4 - \frac{49}{121}y^8$

18 $\frac{121}{169} \times \frac{52}{48} \times \frac{64}{78} \times \frac{72}{343} \times \frac{49}{96} \times \frac{77}{132} =$

19 Estimate $\frac{691.2 \times 37.8 \times 0.192}{749.51 \times 397.1 \times 64.2} \approx$

20 $\frac{m^a \times m^a \times n^{-7}}{n^{18}} = m^{34}n^b$ Find the values of a and b.