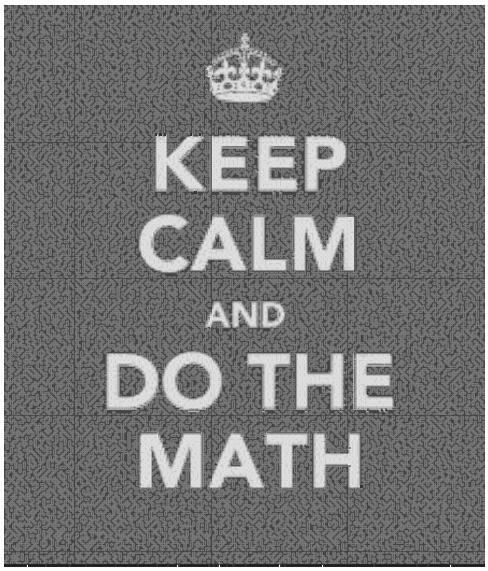
2.6 Homework

GCSE (Year 9) Mathematics
Index Form

Index Form Race N° 4

Do NOT use a calculator



Write answers in prime index form, p^m, for some prime, p, and some real number, m

Target time : 15 minutes

(a) $61^{13} \times 61^{26}$

(b) $\sqrt{2^{32}}$

(c) $17^{45} \times 17$

(d) $\dfrac{29^{44}}{29^{22}}$

(e) $23^{0} \times 23^{54}$

(f) $\left(53^{24}\right)^{3}$

(g) $\sqrt{\left(7^{5}\right)^{10}}$

(h) $p^{11} \times p^{11}$

(i) $p^{\frac{1}{2}} \times p^{\frac{1}{2}}$

(j) $\dfrac{p^{20}}{p^{5}}$

(k) $\left(p^{55}\right)^{2}$

(l) $\dfrac{17^{17}}{17^{0}}$

(m) $p^{0} \times p^{0}$

(n) $\dfrac{\left(11^{7}\right)^{5}}{\left(11^{9}\right)^{3}}$

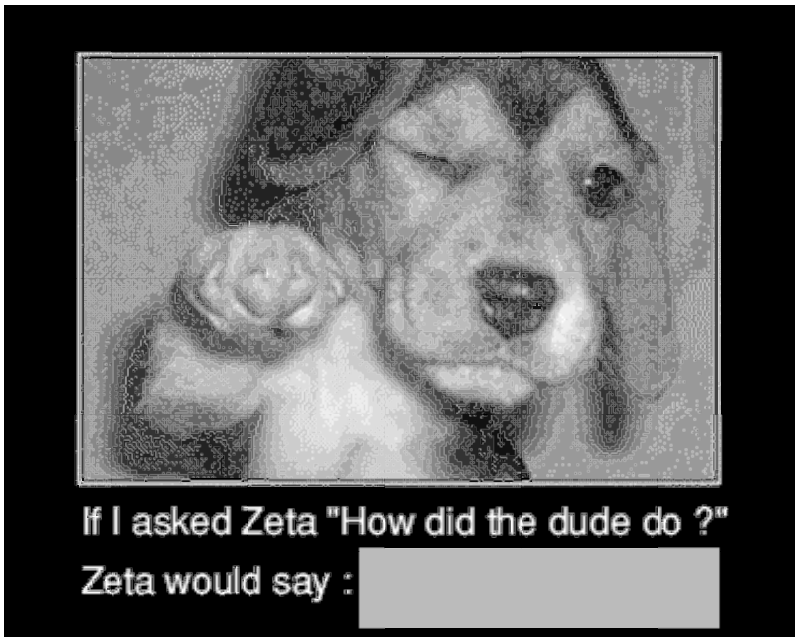
(o) $\sqrt{p^{56}}$

(p) $\left(13^8\right)^3 \times 13^{32}$ **(q)** $\left(11^{12}\right)^{\frac{1}{2}} \times \frac{1}{11^5}$ **(r)** $\left(p^6\right)^6 \times p^{15}$

(s) $\frac{p}{p^5} \times \frac{p^{17}}{p^8}$ **(t)** $\frac{p^4 \times p^{11}}{p^9}$ **(u)** $\left(\left(7^2\right)^3\right)^4$

(v) $\frac{7^{14}}{7^{18}} \times \frac{7^{21}}{7^8}$ **(w)** $\left(\sqrt{p}\right)^{14}$ **(x)** $\frac{\left(3^3\right)^9}{\left(3^4\right)^5}$

(y) $\sqrt{59^{10} \times 59^{20}}$ **(z)** $\sqrt{\frac{\left(67^2\right)^8}{67^{12}}}$



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