Rules of indices - Further Practice

1. Evaluate the following expressions:

(a) $(-16.371)^0 =$

(b) $2^{-3} =$

(c) $(1000)^{1/3} =$

(d) $-\left(-\frac{1}{6}\right)^2 =$

(e) $\left(\sqrt{\frac{3}{8}}\right)^4 =$

(f) $\frac{8^{1/3}+7}{27^{1/3}} =$

(g) $\left(64y^6\right)^{2/3} =$

(h) $(2.25)^{1/2} =$

(i) $\dfrac{7^{-6}}{7^{-8}} =$

(j) $\left(3\dfrac{3}{8}\right)^{1/3} =$

(k) $\left(\dfrac{1}{25}\right)^{-1/2} =$

(l) $\dfrac{1}{8^{-2/3}} =$

2. Simplify the following expressions:

(a) $-3p^4q^2 \times \frac{1}{3}p^3q^6 =$

(b) $(32x^5y)\cdot(2xy^4)\div(4x^3y^2)=$

(c) $\sqrt[3]{x}\cdot\sqrt[5]{x} =$

(d) $(2n)^4 \div 8n^0 =$

(e) $\left((3a^{-1})^{-2}\right)^{-1} =$

(f) $(y^2)^{1/6} \div (9x)^{1/2} =$