

National 5 Homework – Expressions and Formulae

INDICES

1. Simplify $\frac{m^5}{m^3}$
(1)

2. Simplify the expression below, giving your answer with a positive power.

$$m^5 \times m^{-8}$$

(2)

3. Express

$$p^3(p^2 - p^{-3})$$
 in its simplest form.

(2)

4. Simplify

$$\frac{3a^2 \times 2a}{a^2}$$

(3)

5. Express in its simplest form

$$\frac{y^4 \times y}{y^{-2}}$$

(2)

6. Evaluate $16^{\frac{3}{4}}$
(2)

7. Simplify, expressing your answer with positive indices.

$$(x^2 y^4) \div (x^{-3} y^6)$$

(2)

8. Simplify

$$k^8 \times (k^2)^{-3}$$

(2)

9. Express $a^{\frac{2}{3}}(a^{\frac{2}{3}} - a^{-\frac{2}{3}})$ in its simplest form.
(2)

10. Express $a^{\frac{1}{2}}(a + \frac{1}{a})$ in its simplest form.
(2)

20 marks