

Write each of the following as a single power of p

$$\text{a) } p^2 \times p^6 = p^{2+6} = p^8$$

(1)

$$\text{b) } \frac{p^6}{p^2} = p^{6-2} = p^4$$

(1)

$$\text{c) } (p^2)^6 = p^{2 \times 6} = p^{12}$$

(1)

a) Simplify $m^3 \times m^6$ $m^{3+6} = m^9$

b) Simplify $\frac{p^2}{p^8}$ $p^{2-8} = p^{-6}$

(1)

Be careful with this!!

c) Simplify $(m^{-2})^5$ $m^{-2 \times 5} = m^{-10}$

(1)

(2)

Simplify:

$$\text{i) } s^2 t^8 \times s^3 t^2 = s^5 t^{10}$$

$$\text{ii) } (x^3 y)^4 = x^{12} y^4 \quad (2)$$

$$\text{iii) } \frac{y^{16} \times y^2}{y^4} = \frac{y^{18}}{y^4} = y^{14} \quad (2)$$

(2)

Simplify fully:

$$\text{a) } \frac{24x^8y^9}{8x^4y^3} = 3x^4y^6$$

$$\text{b) } 5a^5b^4 \times 3a^3b = 15a^8b^5 \quad (2)$$

$$\text{c) } (2t^4)^3 = 8t^{12} \quad (2)$$

(2)

Evaluate

i. $x^0 =$ |

ii. $5^0 =$ |

(1)

iii. $300^0 =$ |

(1)

(1)

anything to
the power of
zero = 1