WorkSHEET 2.1 Indices

Name: _____

Non-calculator questions

1 State the base for each of the following.

(a) 4^5

(b) y^6

(c) 2^3

2 State the power for each of the following.

(a) y^7

(b) 5^0

(c) 13^{11}

3 Write the following in index form.

(a) $y \times y \times y$

(b) $7 \times 7 \times 7 \times 7 \times 7$

4 Write each of the following as a basic numeral.

(a) 2^5

(b) 4^3

5 Simplify each of the following.

(a) $h^2 \times h \times h^4$

(b) $p^3 \times q^2 \times p \times q^5$

6 Simplify each of the following.

(a) $q^{10} \div q^2$

(b) $d^{16} \div d^2 \times d^5$

7 Simplify each of the following.

(a) 243^0

(b) $f^0 g^3 h^4$

8 Raise each of the following to the given power.

(a) $(y^4)^7$

(b) $(p^5 q^0)^{11}$

9 Is the following statement true or false?

$$\frac{9p^8 \times 2q^{14}}{18q} = p^8 q^{13}$$

10 Find possible powers of f and g to make this a true statement.

$4f^{\square} \times 2g^{\square} \times 2g^{\square} = 16f^{12}g^9$