

**1**Circle the expression equivalent to  $(2x)^4$ **[1 mark]**

$2x^4$

$6x^4$

$8x^4$

$16x^4$

**2** Simplify  $\left(a^5\right)^3$

Circle your answer.

**[1 mark]**

$8a$

$15a$

$a^8$

$a^{15}$

**3**

Work out the value of  $\left(\frac{5}{7}\right)^{-2}$

Give your answer as a mixed number.

**[3 marks]**

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Answer \_\_\_\_\_

4

Simplify  $w^1 \times w^0$ 

Circle your answer.

**[1 mark]**

1

0

 $w$  $w^2$

**5** The equation of a curve is  $y = 16^x$

**5 (a)** Circle the point that lies on the curve.

**[1 mark]**

(2, 32)

(32, 2)

(2, 256)

(256, 2)

3

Circle the reciprocal of  $8^5$ **[1 mark]**

$8^{-5}$

$5^{-8}$

$-8^5$

$5^8$

**7** Write  $(3^6 \times 3^5) : 3^7$  in the form  $n : 1$  where  $n$  is an integer.

**[3 marks]**

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Answer \_\_\_\_\_ : 1

8 (a) Work out the value of  $\left(\frac{5}{4}\right)^{-2}$

[2 marks]

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Answer \_\_\_\_\_

8 (b) Work out the value of  $\left(\frac{9}{100}\right)^{\frac{3}{2}}$

[2 marks]

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Answer \_\_\_\_\_