

## MCT 4C (Grade 12) — Exponential Equations

1.  $2^x = 32$

2.  $3^x = \frac{1}{27}$

3.  $5^{x+1} = 125$

4.  $4^x = 2^{10}$

5.  $8^{x-2} = 2^3$

6.  $9^x = 27$

7.  $16^{x+1} = 2^{3x+8}$

8.  $\left(\frac{1}{4}\right)^x = 2^6$

9.  $25^{x-1} = 5^{3x}$

10.  $10^{2x-1} = 1000$

11.  $\sqrt{2^{x+3}} = 8$

12.  $\sqrt[3]{3^{2x-1}} = 9$

13.  $\sqrt{5^x} = 25$

14.  $\sqrt{32^x} = 2^5$

15.  $\sqrt[4]{16^{x+2}} = 2^{3x}$

16.  $\sqrt{8^{x-1}} = 4$

17.  $\sqrt[3]{27^x} = 9^{x-1}$

18.  $2^x = \sqrt{2^{3x-6}}$

19.  $4^x = \sqrt{2^{5x}}$

20.  $\sqrt[3]{125^{x+1}} = 25^{2x-1}$