Name _____ Date _____

Stage 8 End of Unit 1 Test

1 Work out

a -3×-5

_____ **[1]**

b $-32 \div 4$

_____ **[1]**

c $-2 \times (1 + -8)$

_____ **[1]**

2 **a** Find the highest common factor of 24 and 32. _____ **[1]**

b Find the lowest common multiple of 6 and 9. _____ **[1]**

3 Find the prime factors of 44. _____ **[1]**

4 **a** Using a tree diagram, or otherwise, write 200 as a product of prime factors.

_____ **[2]**

5 **a** $280 = 2^3 \times 5 \times 7$

Use this fact to find the highest common factor of 200 and 280.

_____ **[2]**

b Find the lowest common multiple of 200 and 280.

_____ **[2]**

6 $3^5 = 243$

Use this fact to find 3^6. Show your method.

_____

_____ **[1]**

7 Circle the square numbers in this list.

1 121 −64 49 160 −81 **[1]**

8 $125 = 5^3$ and $15625 = 5^6$ in index form.

Write the answers to these calculations in index form.

a 125×15625 _____ **[1]**

b $15625 \div 125$ _____ **[1]**

9 **a** Show that 64 is a cube number. _____ **[1]**

b Show that 100 is **not** a cube number. _____ **[1]**

10 Find the possible values of n when

a $n^2 = 36$ _____ **[1]**

b $n^3 = -27$ _____ **[1]**

[TOTAL: 20 Marks]

END OF TEST