

FORM 3 MATHEMATICS
CHAPTER 1: INDICES

NAME: _____

CLASS: _____

Exercise (A): Select the correct answer.

TP 3

1.2.6 Perform operations involving laws of indices.

1)	$(n^2)^3 \div n^5$	=	A. 1	B. n^3	C. n	D. n^2
2)	$36^{\frac{3}{2}} \times 3^{-1}$	=	A. 36	B. 72	C. 6	D. 3
3)	$(pq^{-3})^5 \times q^4$	=	A. p^5q	B. pq^{-11}	C. p^5q^{-11}	D. pq^{-1}
4)	$3^n \times 3^3 \times 9^2$	=	A. 3^{6n}	B. 3^{n+5}	C. 3^{5n}	D. 3^{n+7}
5)	$(4m^{-2})^3 \div (-2m)^3$	=	A. $-8m^{-9}$	B. $2m^{-9}$	C. $8m^{-2}$	D. $-2m^9$
6)	$27^{\frac{2}{3}} \times 3^{-1}$	=	A. 9	B. 81	C. 1	D. 3
7)	$(27^{-\frac{1}{3}})^2 \div 3^{-3}$	=	A. 3	B. 9	C. 6	D. 3^{-1}
8)	$\frac{9^{\frac{1}{2}} \times 81^{\frac{3}{4}}}{243^{\frac{2}{5}}}$	=	A. 3	B. 3^2	C. 3^{-1}	D. 3^{-2}

Exercise (B): Fill the blanks with correct answer.

TP 3

1.2.6 Perform operations involving laws of indices.

1) $\frac{2^{\frac{3}{2}} \times 4^2}{8}$ $= \frac{2^{\frac{3}{2}} \times (2^{\square})^2}{2^{\square}}$ $= 2^{\frac{3}{2} + \square - \square}$ $= \square \sqrt{2}$	2) $\frac{243^{\frac{3}{5}} \times 81^{\frac{3}{4}}}{9^{\frac{5}{2}}}$ $= \frac{(3^{\square})^{\frac{3}{5}} \times (3^{\square})^{\frac{3}{4}}}{(3^{\square})^{\frac{5}{2}}}$ $= 3^{\square + \square - \square}$ $= \square$	3) $\frac{625^{\frac{3}{4}} \times 25^{\frac{5}{2}}}{5^5}$ $= \frac{(5^{\square})^{\frac{3}{4}} \times (5^{\square})^{\frac{5}{2}}}{5^5}$ $= 5^{\square + \square - \square}$ $= \square$
4) $\frac{49^{\frac{3}{2}} \times 343^{\frac{2}{3}}}{7^2}$ $= \frac{(7^{\square})^{\frac{3}{2}} \times (7^{\square})^{\frac{2}{3}}}{7^2}$ $= 7^{\square + \square - \square}$ $= \square$	5) $\frac{11 \times 121^{\frac{3}{2}}}{11^2}$ $= \frac{11 \times (11^{\square})^{\frac{3}{2}}}{11^2}$ $= 11^{\square + \square - \square}$ $= \square$	6) $\frac{13^2 \times 169^{-\frac{3}{2}}}{13^{-2}}$ $= \frac{13^2 \times (13^{\square})^{-\frac{3}{2}}}{13^{-2}}$ $= 13^2 \square^3 \square^2$ $= \square$

SMJK CHONG HWA
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