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Grade 8 Math
Exponents and Powers

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Answer The Following

1) Simplify $\sqrt{12+6\sqrt{3}}+\sqrt{12-6\sqrt{3}}$

2) $(2\times10^{15})\times(2\times10^{15})=?$

3) Simplify $\sqrt{\dfrac{3^{36}+3^{38}}{9^{5}+3^{7}\times243}}$

4) Simplify following and write answer in exponential form

A) $\dfrac{5^{5}\times5^{2}}{5^{-7}}\times5^{2}\times5^{-4}$

B) $\dfrac{11^{3}\times11^{5}}{11^{-7}}\times11^{-3}$

5) Simplify 16^{2n+1}.

Choose correct answer(s) from given choice

6) What is the unit's digit in $(234)^{102}+(234)^{109}$?

a. 1 b. 0

c. 7 d. 6

7) Which is smallest among 2^{10}, 3^{10}, 8^{11} and 9^{10}.

a. 2^{10} b. 9^{10}

c. 3^{10} d. 8^{11}

8) If $a^{x}=\sqrt[3]{b}$, $b^{y}=\sqrt[3]{c}$ and $c^{z}=\sqrt[3]{a}$, find the value of xyz.

a. 27 b. $\dfrac{1}{27}$

c. $\dfrac{1}{9}$ d. 9

9) How many prime factors exist for the following expression

$(6)^{7}\times(7)^{5}\times(5)^{3}=?$

a. 24 b. 19

c. 22 d. 25

10) Simplify $m(n^{2n})\times n=?$