Review Exercise & Practice Test

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Simplify then evaluate

a) $[-(-4)^0]^7 = [-1]^7$
$= -1$

b) $3^3 \times 3^4 - 3^5 \times 3$
$= 3^7 - 3^6$
$= 2187 - 729$
$= 1458$

c) $(-2)^6 \div (-2)^5 + (-3)^5 \div (-3)^0$
$(-2)^1 + (-3)^5$
$-2 - 243$
-245

d) $\dfrac{(-2)^6 \times (-2)^2}{(-2)^3 \times (-2)^{10}} = \dfrac{(-2)^8}{(-2)^3}$
$= (-2)^5$
$= -32$

e) $\dfrac{(5^4)^3 \times (5^2)^4}{(5^4 \times 5^4)^2}$
$\dfrac{5^{12} \times 5^8}{(5^8)^2}$
$= \dfrac{5^{20}}{5^{16}}$
$= 5^4$
$= 625$

f) $\dfrac{(10^2)^4 \times (5^3)^4}{(5^4)^2 \times (10^4)^2} \times \dfrac{(10^5)^3 \times (2^4)^3}{(2^2)^4 \times (10^6)^2}$
$= \dfrac{10^8 \times 5^{12}}{5^8 \times 10^8} \times \dfrac{10^{15} \times 2^{12}}{2^8 \times 10^{12}}$
$= \dfrac{10^{23} \times 5^{12} \times 2^{12}}{10^{20} \times 5^8 \times 2^8}$
$= 10^3 \times 5^4 \times 2^4$
$= 1000 \times 625 \times 16$
$= 10\,000\,000$

#16 $10^2 \times 10^5 + 10^5 = 10^7 + 10^5$

$= 10\,000\,000 + 100\,000$

$= 10\,100\,000$

#19. Single Power

$-(-7^2)^3 = 7^6$ | $-(7^2)^3 = -7^6$