Pretest G #8

$\begin{cases} a = 0.5 \\ m = 3 \end{cases}$

Pick a value for a.
Pick a value for m.
↳ Sub them into expression and verify if exp. is true.

a) $-1 < -a^m < 0$

$a < 1$
$0 < a \leq 1$

$-1 < -0.5^3 < 0$

$-1 < -0.125 < 0$

T / F

b) $a > \left(\frac{-1}{a}\right)^{-m}$

$0.5 > \left(\frac{-1}{0.5}\right)^{-3}$

T / F $0.5 > -0.125$

c) $\left(\frac{1}{a}\right)^m > a^{-m}$

$8 > 8$

T / F

$8 \geq 8$

d) $(-a)^m < \left(\frac{1}{a}\right)^{-m}$

T / F

• G #11

$(2\sqrt{12}-5)(3\sqrt{3}+7)$

$(2\times3)\sqrt{12\times3} + 7\times2\sqrt{12} - 5\times3\sqrt{3} - 5\times7$

$6\sqrt{36} + 14\sqrt{12} - 15\sqrt{3} - 35$

6

12
1 12
2 6
3 4

$36 + 14\sqrt{4\times3} - 15\sqrt{3} - 35$

$36 + 14\cdot\sqrt{4}\sqrt{3} - 15\sqrt{3} - 35$

2

$36 + 28\sqrt{3} - 15\sqrt{3} - 35$

$1 + 13\sqrt{3}$

Pretest A

#9 Which expression(s) is/are equivalent to: $\sqrt[3]{64a^7b^4 \times b^2}$

$64 = 2^?$

$4 = 2^2$

$\sqrt[3]{2^6 a^7 b^6} = (2^6 a^7 b^6)^{\frac{1}{3}}$ (1)

$= (2^6)^{\frac{1}{3}} (a^7)^{\frac{1}{3}} (b^6)^{\frac{1}{3}}$ (6)

$= 2^2 a^{\frac{7}{3}} b^2$

~~a)~~ $4a^2b^2\sqrt[3]{ab^3}$

$2^2 a^2 b^2 (ab^3)^{\frac{1}{3}}$ (6)

$2^2 a^2 b^2 a^{\frac{1}{3}} (b^3)^{\frac{1}{3}}$ (5)

$2^2 a^2 a^{\frac{1}{3}} b^2 b^1$

$2^2 a^{\frac{7}{3}} b^3$

c) $4a^2b^2\sqrt{a}$

b) $8a^3b^3\sqrt{a}$

d) $2^2 ab^2\sqrt[3]{a^4b^2}$

Pretest A

11. Determine which exp. are equivalent

a) $\left(\frac{3^2}{4}\right) = \frac{3^2}{2^2} = \left(\frac{3}{2}\right)^2$

b) $\left(\frac{4^2}{3}\right)^{-3} = \left(\frac{(2^2)^2}{3}\right)^{-3} = \left(\frac{2^4}{3}\right)^{-3} = \frac{(2^4)^{-3}}{3^{-3}} = \frac{2^{-12}}{3^{-3}} = \frac{3^3}{2^{12}}$

c) $\left(\frac{3}{2}\right)^6 = \frac{3^6}{2^6}$

d) $4^{-3} \times \sqrt{3^{12}} = (2^2)^{-3} \times 3^{\frac{12}{2}} = 2^{-6} \times 3^6 = \frac{3^6}{2^6}$

e) $3^6 (\sqrt{16})^{-3} = 3^6 (4)^{-3} = 3^6 (2^2)^{-3} = 3^6 2^{-6} = \frac{3^6}{2^6}$

$$\frac{2^{-6}}{a^2} = \frac{1}{2^6 a^2}$$