4/

$$\left(\frac{10x^2y^{-2}}{9x^{-3}y^3}\right)^{-2} \left(\frac{2x^{-3}y^8}{3x^{-5}y^6}\right)^3$$

$$\left(\frac{9x^{-3}y^3}{10x^2y^{-2}}\right)^2 \cdot \left(\frac{2x^{-3}y^8}{3x^{-5}y^6}\right)^3$$

$$\frac{\overset{3}{81}x^{-6}y^6}{\underset{25}{100}x^4y^{-4}} \cdot \frac{\overset{2}{8}x^{-9}y^{24}}{27x^{-15}y^{18}}$$

$$= \frac{6\ x^{-15}y^{30-14}}{25\ x^{-11+15}y^{14}}$$

$$= \frac{6\ y^{16}}{25\ x^4}$$

$$\frac{81}{100} \cdot \frac{8}{27}$$

$$\frac{4^{-3}}{4^7 \cdot 4^{-5}} = \frac{4^{-3}}{4^{2+3}} = \frac{1}{4^5}$$

$$= \frac{1}{1024}$$

No Graphing Calc
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* Scientific Notation
  (9-10)

* 20-24

* Graphs

$$\frac{4.8 \times 10^3}{(1.2 \times 10^5)(8 \times 10^2)}$$

$$\frac{4.8 \times 10^{3-7}}{9.6 \times 10^7}$$

$$1.2a^6 \cdot 8a^2 = 0.5 \times 10^{-4-1}$$

$$\boxed{5 \times 10^{-5}}$$

1) $\sqrt[6]{p^5 q^2} \cdot \sqrt[2]{p^3 q}$

$\sqrt[6]{p^5 q^2} \cdot \sqrt[6]{p^9 q^3}$

$= \sqrt[6]{p^{14} q^5}$

$p^2 \sqrt[6]{p^2 q^5}$

<u>Abs value</u>
Even index
Even power inside
Odd power outside

$y = x^3$

| 0 | 0 |
|---|---|
| 1 | 1 |
| 2 | 8 |

$y = \sqrt[3]{x}$

| 0 | 0 |
|---|---|
| 1 | 1 |
| 8 | 2 |

$y = x^2$

| 0 | 0 |
|---|---|
| 2 | 4 |
| 3 | 9 |

$y = \sqrt{x}$

$y = -2\sqrt[3]{3-x} + 1$

$= -2\sqrt[3]{-(x-3)} + 1$

Right  UP
3      1

| 0 | 0 |
|---|---|
| -1 | 1 |
| -8 | 0 |
| 1 | -2 |
| 2 | -4 |