

Written assignments
to hand in.

Sec P3 14, 32

Due Tuesday 9/5

Sec P4 68, 80

Due Friday 9/8

Solutions to P2
will be online at
daniel-silatny.xyz
after class.

Discussion Problems P3

12-33 $\div 3$

(12) Evaluate

$$(-5)^3 = (-5)(-5)(-5) = -125$$

$$-5^3 = -5 \cdot 5 \cdot 5 = -125$$

similar $(-5)^4 = 625$

$$-5^4 = -625$$

$$(-5)^2 \left(\frac{2}{5}\right)^2 = \boxed{(-\cancel{5})(-\cancel{5}) \frac{2}{\cancel{5}} \frac{2}{\cancel{5}}} = 4$$

$$(-5)^2 \left(\frac{2}{5}\right)^2 = \left(-\cancel{5} \cdot \frac{2}{\cancel{5}}\right)^2 = (-2)^2 = 4$$

Discussion Problems
From the department syllabus
These are not to hand in.

Section P3, P4

WebAssign

Sections P3+P4

Due Thursday 9/7

by 9pm.

$$\textcircled{18} \quad 3^{-3} \cdot 3^{-1} = 3^{-4} = \frac{1}{3^4} = \left(\frac{1}{81}\right)$$

$$\frac{5^4}{5} = 5^{4-1} = 5^3 = \textcircled{125}$$

$$\begin{aligned} \frac{7^2}{7^5} &= 7^{2-5} = 7^{-3} = \frac{1}{7^3} \\ &= \frac{1}{7^{5-2}} = \frac{1}{7^3} = \textcircled{343} \end{aligned}$$

$$\textcircled{27} \quad (2x^2y^3)^2(3y) = 2^2(x^2)^2(y^3)^2 3y = 4x^4y^6 3y = \textcircled{12x^4y^7}$$

$$\textcircled{b} \quad \frac{x^2y^{-1}}{x^{-5}} = \frac{x^2x^5}{y} = \left(\frac{x^7}{y}\right)$$

$$\textcircled{30} \quad (x^{-2}y^4)^{-1} = (x^{-2})^{-1}(y^4)^{-1} = x^2y^{-4} = \frac{x^2y^{-1}}{1} = \left(\frac{x^2}{y^4}\right)$$

$$\begin{aligned} \textcircled{c} \quad \left(\frac{2a^{-1}}{b^{-2}}\right)^{-3} \left(\frac{b^{-1}}{2a^2}\right)^2 &= \frac{2^{-3}(a^{-1})^{-3}}{(b^{-2})^{-3}} \frac{(b^{-1})^2}{2^2(a^2)^2} = \frac{2^{-3}a^3b^{-2}}{b^6 2^2 a^4} = \frac{a^3}{2^3 2^2 a^4 b^6 b^2} \\ &= \frac{a^3}{32a^4 b^8} \\ &= \boxed{\frac{1}{32ab^8}} \end{aligned}$$