

# Warmup 1 / $(-5^2 + (-6)^2)$

- 1) Copy the date problem and show work to verify why it is correct.
- 2) The population of Bridgeville triples every decade. Its population in 2000 was 25,000. Which of these expressions would calculate the population in 2040?
  - A)  $25,000 \cdot 3 \cdot 4$
  - B)  $25,000 \cdot 3 \cdot 40$
  - C)  $25,000 \cdot 4^3$
  - D)  $25,000 \cdot 3^4$
  - E)  $25,000 \cdot 3^{40}$
- 3) Calculate the exact population of Bridgeville in 2040.



# If you're done with your corrections/extension...

- I would LOVE for you to turn them in today, so I can start grading them over the weekend!
- Don't forget to turn in your packet of questions with the assignment.

# Practice

1. Simplify:  $(-10)^4 = (-10) \cdot (-10) \cdot (-10) \cdot (-10) = 10,000$
2. Simplify:  $-5^2 = -(5 \cdot 5) = -25$
3. Simplify:  $\left(\frac{3}{2}\right)^3 = \left(\frac{3}{2}\right) \left(\frac{3}{2}\right) \left(\frac{3}{2}\right) = \frac{3 \cdot 3 \cdot 3}{2 \cdot 2 \cdot 2} = \frac{27}{8}$
4. Evaluate  $9x^2$  when  $x = 4$ .  $= 9 \cdot 4^2 = 9 \cdot 16 = 144$
5. Evaluate  $-a^6$  when  $a = 2$ .  $= -(2)^6 = -64$
6. Evaluate  $c^2$  when  $c = -31$ .  $= (-31)^2 = 961$
7. Is the value of  $(-84)^{63}$  positive or negative? Explain how you know. **Negative; any negative number to an odd power is negative.**

# Homework

- p. 19 (1 – 5, 7, 9 – 12)
- **NO CALCULATOR!**
- (9-12 are challenging: be careful!!!)

p. 19 (1 - 5, 7, 9-12)

1.  $(-5)^4$

9. -311

2.  $3^2 \cdot 5 \cdot q^3$

10. 37

3.  $m^5$

11. 16

4. 6,561

12. 10

5.  $\frac{1}{81}$

7. 8,000,000,000  
(8 billion)

$$\begin{aligned}
 9) \quad & g^5 - h^3 \\
 & (2)^5 - (7)^3 \\
 & 32 - 343 \\
 & -311
 \end{aligned}$$

$$\begin{aligned}
 10) \quad & c^2 + d^3 \\
 & (8)^2 + (-3)^3 \\
 & 64 + (-27) \\
 & 37
 \end{aligned}$$

$$\begin{aligned}
 11) \quad & a^2 \cdot b^6 \\
 & \left(\frac{1}{2}\right)^2 \cdot (2)^6 \\
 & \frac{1}{4} \cdot 64 \\
 & 16
 \end{aligned}$$

$$\begin{aligned}
 12) \quad & (r - s)^3 + r^2 \\
 & (-3 - (-4))^3 + (-3)^2 \\
 & (1)^3 + 9 \\
 & 10
 \end{aligned}$$

# OVER THE WEEKEND:

- Finish corrections/extension assignment
- 30 Minutes of ALEKS