REVIEW

- 1. Which expression is equivalent to $\sqrt[3]{27x^9y^{12}}$?
- A) $3x^{27}y^{36}$

3x344

- B) $9x^{27}y^{36}$
- $C) 3x^3y^4$
- D) $9x^3y^4$
- 2. Solve for x: $\sqrt{8x+17}-19=-10$ +19

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3. The number of bacteria in a swimming pool after disinfection can be modeled by the equation

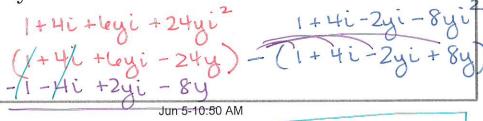
 $y = 5500\sqrt{0.025x + 0.1}$ where x is the number of minutes.

At what time are there 3000 bacteria left in the

$$\frac{3000 = 5500 \sqrt{0.025 \times +0.1}}{5500}$$

$$\frac{\left(\frac{1}{11}\right)^{2} - \left(\sqrt{0.025 \times +0.1}\right)^{2}}{\frac{3!}{12!} = 0.025 \times +0.1}$$

4. Simplify (1 + 6yi)(1 + 4i) - (1 - 2yi)(1 + 4i) and express your answer in a + bi form.

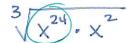


8yi-32y = [-32y + 8yi

7.9 = x

munutes

- 5. The expression $\sqrt[3]{x^{26}}$ is equivalent to
- A $x^8\sqrt[3]{x}$



- B. $x^{8\sqrt[3]{x^2}}$

- C. $x^7 \sqrt[3]{x}$
- D. $x^{7\sqrt[3]{x^2}}$

6. The length a spring is stretch from its natural length with work, W, is given by $L = \sqrt{\frac{2W}{k}}$, where k is a constant for the given spring. If a certain spring has a constant of 32.9 and the spring is to be stretch 1.2 feet from its natural length, how much work will be necessary? Round your answer to the nearest tent.

47.376=24

→ W=23.7 Jun 5-10:54 AM

23.688= W

7. Express $\left(\frac{\sqrt{3}}{4} - \frac{\sqrt{3}}{2}i\right)^2$ in simplest radical form.

$$\frac{3}{16} - \frac{3}{8}i$$
 $-\frac{3}{8}i$
 $+\frac{3}{4}i$

$$\frac{3}{16} - \frac{6}{8}i - \frac{3}{4} = \begin{bmatrix} -9 & 3i \\ 16 & 4i \end{bmatrix}$$

HOMEWORK: Complete Unit 1 Review Sheet