

Weekly Review #21

Name: _____ Class: _____

Due Date #1: **Tues. 3/24** Due Date #2: **Fri. 3/27** (Regardless of whether you have class.)

- 1.) Hannah was given \$5000 when she turned 4 years old. Her parents invested it at a 3% interest rate compounded annually. No deposits or withdrawals were made. Which expression can be used to determine how much money Hannah had in the account when she turned 15?
- (A) $5000(1 + 0.03)^{15}$ (C) $5000(1 + 0.03)^{11}$
(B) $5000(1 - 0.03)^{15}$ (D) $5000(1 - 0.03)^{11}$

- 2.) The equation for the volume of a cylinder is $V = \pi r^2 h$. The positive value of r in terms of V and h is

(A) $r = \sqrt{\frac{V}{\pi h}}$ (C) $r = 2V\pi h$
(B) $r = \sqrt{V\pi h}$ (D) $r = \frac{V}{\pi h}$

- 3.) Find the average rate of change of change on the graph of $f(x) = x^2 + 4x + 1$ on the interval $-1 \leq x \leq 4$.

(A) $\frac{31}{7}$ (C) $\frac{1}{7}$
(B) 7 (D) $\frac{3}{31}$

- 4.) Given the variables listed below, which expression results in a rational number?

$$L = \sqrt{3}$$

$$M = \sqrt{121}$$

$$N = \sqrt{25}$$

$$P = 2\sqrt{7}$$

(A) $L + M$ (C) $N + P$
(B) $M + N$ (D) $P + L$

- 5.) What are the solutions of the equation $x^2 + 6x - 11 = 0$?
- (A) $-3 \pm 2\sqrt{5}$ (C) $-3 \pm 4\sqrt{5}$
(B) $3 \pm 2\sqrt{5}$ (D) $3 \pm 4\sqrt{5}$
- 6.) The value of the x-intercept for the graph $3x - 2y = 24$ is
- (A) $-\frac{3}{2}$ (C) $\frac{3}{2}$
(B) -12 (D) 8
- 7.) Solve for the value of x that satisfies the equation $\frac{7}{5}\left(x + \frac{26}{35}\right) = 24$.
- 8.) Jared and Nick work at a furniture store. Jared is paid \$265 per week plus 4 % of his total dollars, x , which can be represented by $g(x) = 265 + 0.04x$. Nick is paid \$580 per week plus 2.5% of his total sales in dollars, x , which can be represented by $f(x) = 580 + 0.025x$. Determine the value of x , in dollars, that will make their weekly pay the same.
- 9.) Subtract $4x^2 + 7x - 9$ from $2x^2 - 8x + 1$.
- 10.) Solve algebraically for all values of x : $2x^2 + 30x + 15 = -4x^2 + 2x - 1$