

Review packet day 2

$$10.) 4(x+2)(x-1)(x-5)$$

$$5.) g(f(x))$$

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

$$= x - 3 + 1$$

$$= x - 2$$

all reals

$$\sqrt{x-3}$$

$$x-3 \geq 0$$

$$x \geq 3$$

$$(-\infty, \infty)$$

$$[3, \infty)$$

$$14.) \log_5 X+3$$

$$\frac{\log(X+3)}{\log 5} = \frac{\ln(X+3)}{\ln 5}$$

A

$$16.) A = P\left(1 + \frac{r}{n}\right)^{nt}$$

$$\frac{4550}{2700} = \frac{2700}{2700} \left(1 + \frac{0.09}{12}\right)^{12t}$$

$$\log 1.68518 = \log 1.0075^{12t}$$

$$\frac{\log 1.68518}{\log 1.0075} = \frac{12t \log 1.0075}{\log 1.0075}$$

$$\frac{69.84359}{12} = \frac{12t}{12}$$

$$t \approx 5.8202 \dots$$

$$0.8202 \times 12 =$$

25.)

$$\begin{array}{r}
 2x^2 - 4x \\
 x+2 \overline{) 2x^3 + 0x^2 - x + 6} \\
 \underline{-2x^3 + 4x^2} \quad \vdots \\
 -4x^2 - x \quad \vdots \\
 \underline{+4x^2 + 8x} \quad \vdots \\
 7x + 6
 \end{array}$$

E

22.)

$$\frac{8+3i}{3-4i} \cdot \frac{(3+4i)}{(3+4i)}$$

$$= \frac{24 + 41i + 12i^2}{9 - 16i^2} = \frac{12 + 41i}{25}$$

$$\frac{12}{25} + \frac{41}{25}i$$

$$\downarrow \quad \downarrow$$

$$0.48 + 1.64i$$

A

$$40.) 2\cos^2x + 3\cos x - 2$$

$$(2\cos x - 1)(\cos x + 2) = 0$$

$$2\cos x - 1 = 0 \quad \cos x + 2 = 0$$

$$2\cos x = 1 \quad \cos x = -2$$

$$\cos x = \frac{1}{2}$$

$$x = \frac{\pi}{3}$$