

# Review Packet day 2

25.)

$$y = 2x^2 - 4x + 7$$

$$\begin{array}{r}
 x+2 \overline{) 2x^3 + 0x^2 - x + 6} \\
 \underline{-2x^3 + 4x^2} \phantom{-x + 6} \\
 4x^2 - x + 6 \\
 \underline{-4x^2 + 8x} \phantom{+ 6} \\
 7x + 6 \\
 \underline{-7x + 14} \\
 -8
 \end{array}$$

E

29.)

$$\begin{array}{r}
 x^2 \\
 x+1 \overline{) x^3 + 0x^2 + 0x - 1} \\
 \underline{-x^3 + x^2} \\
 -x^2
 \end{array}$$

A

$$37.) \theta = \frac{s}{r}$$

$$\theta = \frac{24}{12} \quad \boxed{A}$$

$$\theta = 2$$

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

$$\frac{\log x + 3}{\log 5} = \frac{\ln x + 3}{\ln 5} \quad \boxed{A}$$

$$31.) y = ae^{kt}$$

$$2a = ae^{4k} \quad y = ae^{0.173286t}$$

$$\ln 2 = \ln e^{4k} \quad \ln 10000 = \ln e^{0.173286t}$$

$$\frac{\ln 2}{4} = \frac{4k}{4} \quad \frac{\ln 10000}{0.173286} = 0.173286t$$

$$k \approx 0.173286 \quad \boxed{A} \quad t \approx 53.15$$

$$27.) \frac{24 \text{ miles}}{3 \text{ hrs.}} = 8 \text{ mph}$$

$$+ 15$$

$$\boxed{D} \quad \textcircled{23 \text{ mph}}$$

$$33.) \log(x-1)^4 + \log(x+4)^2$$

$$\log[(x-1)^4 \cdot (x+4)^2]$$

C