

MATH 205 EXAM 2 REVIEW

- 1) (A) Jason did not get an A in Calculus.
 (B) Today is Thursday.

2) Inverse: If a person does not live in New Jersey, then the person does not live in the United States.

Converse: If a person lives in the United States, then the person lives in New Jersey.

Contrapositive: If a person does not live in the United States, then the person does not live in New Jersey.

- 3) Wanda received tulips from Gary.
 Tiffany received roses from Mark.
 Karen received gladioli from Matt.
 Sheila received lilies from Dave.

4) A)
$$\begin{array}{r|rr} 5^2 & 5^1 & 5^0 \\ \hline 2 & 4 & 3 \end{array}$$

$$\begin{aligned} 243_{\text{five}} &= 2(25) + 4(5) + 3(1) \\ &= 50 + 20 + 3 \\ &= 73 \end{aligned}$$

$$243_{\text{five}} = 73$$

B)
$$\begin{array}{r|rrr} 4^3 & 4^2 & 4^1 & 4^0 \\ \hline 3 & 1 & 2 & 1 \end{array}$$

$$217 = 3121_{\text{four}}$$

$$\begin{array}{r} 217 \\ -192 \\ \hline 25 \\ -16 \\ \hline 9 \\ -8 \\ \hline 1 \\ -1 \\ \hline 0 \end{array}$$

C)
$$\begin{array}{r|rrr} \downarrow & \downarrow & \leftarrow & \downarrow \\ 12^3 & 12^2 & 12^1 & 12^0 \\ \hline 2 & 3 & 8 & 1 \end{array}$$

$$\begin{aligned} &2(12^3) + 3(12^2) + 8(12^1) + 1(12^0) \\ &= 3456 + 432 + 96 + 1 \\ &= 3985 \end{aligned}$$

$$3985 \text{ units}$$