3.2.3.

A 1024-bit message with 992 data bits and 32 CRC bits ~~follows~~ uses IEEE 802 CRC-32 ($x^{32}+x^{26}+x^{23}+x^{22}+x^{16}+x^{12}+x^{11}+x^{10}+x^8+x^7+x^5+x^4+x^2+x+1$).

Explain if these errors will be detected:

a) Single-bit error
b) Two isolated bit errors
c) 18 isolated bit errors
d) 47 isolated bit errors
e) 24-bit burst error
f) 35-bit burst error.

a) Caught, since C(x) includes +1
b) Caught, since C(x) has ≥ 3 terms
c) Not caught
d) ~~Caught, since 47 is odd and C(x) mod (x+1) = 0~~ Not caught
e) Caught, since 24 < 32 burst ~~is caught~~
f) ~~Caught, since 35 is odd ...~~ Not caught

3.2.4

Given the word ~~and the divisor~~ 10100111 and the divisor 10111, show the CRC generator at sender.

```
10111 | 10100111 0000
        10111
         11111
         10000
          11100
          10110
           00011
```

$T_x = 10100111\,0001$