

**STAT 400 SUMMER II 2001 (PROFESSOR GREEN)
SOLUTIONS TO PROBLEMS DUE AUGUST 2**

26.

- (a) .4950
- (b) .3413
- (c) .4938
- (d) .9876
- (e) .9147
- (f) .9599
- (g) .9104
- (h) .0791
- (i) .0668
- (j) .9876

28.

- (a) 1.341
- (b) -1.341
- (c) .675
- (d) -.675
- (e) -1.555

30.

- (a) .9772
- (b) .5
- (c) .9104
- (d) .8413
- (e) .2417
- (f) .6826

32.

- (a) .8790
- (b) .0004
- (c) Concentrations above .3987.

34. The first machine will produce an acceptable cork with probability .6826. The second will produce an acceptable cork with probability

.9987 and is therefore preferable. The much smaller standard deviation more than compensates for the slightly high mean.

38. σ needs to be at most .051°.

42.

(a) .7938

(b) 5.88

(c) 7.938

(d) $p = .8997$ which is close enough to .9 not to matter. From the binomial table, the probability is .264.