## Answer Key pg 434

9. Right tailed,  $\mu$  10. Left tailed, P 11. 2 tailed,  $\sigma$  12. Right tailed, P

13. Left tailed,  $\mu$  14. 2 tailed,  $\sigma$  15.  $H_0$ :  $P \le 0.105$ ,  $H_1$ : P > 0.105

16.  $H_0$ :  $\mu = $17072 H_1$ :  $\mu \neq $17072$  17.  $H_0$ :  $\mu \geq $218,600 H_1$ :  $\mu < $218,600$ 

18.  $H_0$ :  $H_1$ :  $\mu \ge 32$   $H_1$ :  $\mu < 32$  19  $H_0$ :  $\sigma \ge 0.7$   $H_1$ :  $\sigma < 0.7$ 

20.  $H_0$ :  $P \le 0.196$   $H_1$  P > 0.196 21.  $H_0$ :  $\mu = $47.47$   $H_1$ :  $\mu \ne $47.47$ 

22.  $H_0$ :  $\sigma \ge 112$   $H_1$ :  $\sigma < 112$ 

23. Evidence supports the claim that the percentage has increased

24. Evidence does not support the claim that the percentage has changed

25. Evidence does not support the claim that the mean price has decreased

26. Evidence supports the claim that jars are being underfilled

27. Evidence does not support the claim that the variability has decreased

28. Evidence does not support the claim that the percentage has increased

29. Evidence supports the claim that the bill is different

30. Evidence does not support the claim that math scores have decreased

31. Evidence does not support the claim that the percentage has increased

32. Evidence supports the claim that the percentage has changed

33. Evidence supports the claim that the mean price has decreased

34. Evidence does not support the claim that jars are being underfilled

## Answer Key Pg 445

- 7.  $H_0$ :  $P \le 0.3$   $H_1$ : P > 0.3; Z = 2.31; Reject  $H_0$
- 9.  $H_0$ :  $P \ge 0.55$   $H_1$  P < 0.55; Z = -0.74; Do not reject  $H_0$
- 11.  $H_0$ : P = 0.9  $H_1$ : P  $\neq$  0.9; Z = -1.49; Do not reject  $H_0$
- 15.  $H_0$ :  $P \le 0.019$   $H_1$ : P > 0.019(c); Z = 0.65; Do not reject  $H_0$ ; Evidence does not support the claim that more than 1.9% of Lipitor users experience flu-like symptoms
- 16.  $H_0$ :  $P \le 0.94$   $H_1$ : P > 0.94(c); Z = 0.69; Do not reject  $H_0$ ; Evidence does not support the claim that the percentage is more than 94%
- 17.  $H_0$ :  $P \le 0.50$   $H_1$ : P > 0.50(c); Z = 1.09; Do not reject  $H_0$ ; Evidence does not support the claim that the majority of US adults believe they will not have enough money in retirement
- 18.  $H_0$ :  $P \le 0.50$   $H_1$ : P > 0.50(c); Z = 1.70; Reject  $H_0$ ; Evidence supports the claim that the majority of Illinois students are prepared for social sciences
- 19.  $H_0$ :  $P \le 0.56$   $H_1$ : P > 0.56(c); Z = 2.60; Reject  $H_0$ ; Evidence supports the claim that the percentage of adults who report that math skills are important to their job has increased
- 21.  $H_0$ : P = 0.52  $H_1$ :  $P \neq 0.56(c)$ ; Z = -11.32; Reject  $H_0$ ; Evidence supports the claim that the proportion of children in HS were not being taught enough math or science
- 22.  $H_0$ : P = 0.58  $H_1$ :  $P \neq 0.58(c)$ ; Z = -0.45; Do not reject  $H_0$ ; Evidence does not support the claim that the proportion of females living alone has changed