(a) Samples are not large, therefore we use the T-distribution with $n+m-2=32$ degrees of freedom. The 95% confidence interval for $\mu_1-\mu_2$ is

$$\begin{aligned} &\bar{X}-\bar{Y} \pm t_{0.05/2}\sqrt{s_p^2\left(\frac{1}{n}+\frac{1}{m}\right)} \\ =\quad & 50-40.2 \pm (2.037)\sqrt{(61.1625)\left(\frac{1}{14}+\frac{1}{20}\right)} \\ =\quad & \boxed{9.8 \pm 5.55 \text{ or } [4.25, 15.35]} \end{aligned}$$

(b) Test the null hypothesis $H_0 : \mu_1 = \mu_2$ against the alternative hypothesis H_A : $\mu_1 > \mu_2$ that reflects reduction in the rate of intrusion attempts.
Assuming equal variances: the test statistic is

$$t = \frac{\bar{X}-\bar{Y}}{\sqrt{s_p^2\left(\frac{1}{n}+\frac{1}{m}\right)}} = \frac{50-40.2}{\sqrt{(61.1625)\left(\frac{1}{14}+\frac{1}{20}\right)}} = 3.5960.$$

Using Table A5 with $n-m+2=32$ degrees of freedom, obtain

$$P = \boldsymbol{P}\{t > 3.5960\} = \boxed{\text{between } 0.0005 \text{ and } 0.001}$$

Not assuming equal variances: the test statistic is

$$t = \frac{\bar{X}-\bar{Y}}{\sqrt{\frac{s_X^2}{n}+\frac{s_Y^2}{m}}} = \frac{50-40.2}{\sqrt{\frac{58}{14}+\frac{63.33}{20}}} = 3.6248.$$

In this case, degrees of freedom are computed by Satterthwaite approximation,

$$\nu = \frac{\left(\frac{s_X^2}{n}+\frac{s_Y^2}{m}\right)^2}{\frac{s_X^4}{n^2(n-1)}+\frac{s_Y^4}{m^2(m-1)}} \approx 29.$$

Using Table A5 with 29 degrees of freedom, obtain

$$P = \boldsymbol{P}\{t > 3.6248\} = \boxed{\text{between } 0.0005 \text{ and } 0.001}$$

In both cases, there is a very significant evidence that the average number of intrusion attempts per day has decreased after the change of firewall settings.