06-05-2019

$X \sim N(8.8, 6.52)$

1) $Pr(7.28 < X \le 7.42)$

   pnorm(7.42, 8.8, sqrt(6.52)) - pnorm(7.28, 8.8, sqrt(6.52));

   $= 0.01861462$ ✓

2) $Pr(X < 8.38)$

   pnorm(8.38, 8.8, sqrt(6.52))

   $= 0.4346748$ ✓

3) $Pr(|X| > 6.77) = Pr(x < -6.77) + Pr(x > 6.77)$

   pnorm(-6.77, 8.8, sqrt(6.52)) + 1 - pnorm(6.77, 8.8, sqrt(6.52));

   $= 0.786696$ ✓