

1. We borrowed \$1000 for a year, with a simple annual interest rate of 8.1%. After 4 months, we make a partial payment of \$300. After an additional 5 months, we make another partial payment of \$400. How much do we have to pay at the end of the year?
2. How much money do we need to place into a bank account with 7.5% compound annual interest rate, compounded annually, so that after 10 years, we have \$10 000 in the account?
3. How much money do we need to place into a bank account with 7.5% compound annual interest rate, compounded monthly, so that after 10 years, we have \$10 000 in the account?
4. Translate a 9.5% discount rate to interest rate.
5. Compute $\binom{5}{1} + \binom{5}{3} + \binom{5}{5} =$
6. To obtain the right color, we need to mix 6 gallons of blue paint with 15 gallons of red paint. How much blue paint should we use with 40 gallons of red paint?
7. We pull a card from a standard deck of 52. What is the probability that we pull a king or a queen?
8. We randomly pull two cards out of a standard deck of 52, without replacement.
 - (a) What is the probability that we pull a king first and then an ace?
 - (b) What is the probability that we pull a king and an ace?
 - (c) What is the probability that we pull two aces?
 - (d) What is the probability that we pull two diamonds?
 - (e) What is the probability that we pull two red cards?
9. We randomly pull two cards out of a standard deck of 52, with replacement.
 - (a) What is the probability that we pull a king first and then an ace?
 - (b) What is the probability that we pull a king and an ace?
 - (c) What is the probability that we pull two aces?
 - (d) What is the probability that we pull two diamonds?
 - (e) What is the probability that we pull two red cards?
10. The price of A TV set was lowered from \$350 to \$304.5. What percent of a change does this represent?
11. Find the volume of the solid whose height is 9 in and whose base is a right triangle with sides 5 in, 12 in, and 13 in.