

Review Problems

- Find the present value of \$10000, twenty years from now. Assume an annual compound interest rate of 6%, compounded
 - monthly.
 - continuously.
- Which is the better deal, to receive \$2000 now, or to receive \$3000 six years from now? (Assume an annual compound interest rate of 5%, compounded annually.)
- Which is the better deal, to receive \$2000 now, or to receive \$3000 six years from now? (Assume an annual compound interest rate of 8%, compounded annually.)
- We wish to buy a used car for \$5000. The dealership has a finance plan of \$500 down payment and 36 monthly payments with an APR of 6%. Find the monthly payment under this plan.
- We wish to buy a used car for \$7500. The dealership has a finance plan of \$500 down payment and 48 monthly payments of \$161.20. Find the APR that the bank charges.
- We have 15 marbles in a bag: 9 blue, 5 green, and 1 yellow. We randomly pull two marbles, without replacement. Find the probability of each of the following events.
 - We pull two marbles of different colors.
 - We pull at least one green marble.
- We have 15 marbles in a bag: 9 blue, 5 green, and 1 yellow. We randomly pull two marbles, with replacement. Find the probability of each of the following events.
 - We pull two marbles of the same color.
 - We pull at least one green marble.
- Three sides of a trapezoid are given: the non-parallel sides are 25 cm and 40 cm long. the longer parallel side is 49 cm. The height of the trapezoid is 24 cm.
 - Find the missing side of the trapezoid.
 - The trapezoid is the base of a 15 cm high solid. Find the volume.
 - The trapezoid is the base of a 15 cm high pyramid. Find the volume.
- The ratio of cats to dogs was 10 to 21.
 - If there was 420 dogs, how many cats were there?
 - If there was 420 cats, how many dogs were there?

Review Problems - Answers

- Find the present value of \$10000, twenty years from now. Assume an annual compound interest rate of 6%, compounded
 - monthly. $\$3020.96$
 - continuously. $\$3011.94$
- Which is the better deal, to receive \$2000 now, or to receive \$3000 six years from now? (Assume an annual compound interest rate of 5%, compounded annually.) $\frac{3000}{\left(1 + \frac{.05}{1}\right)^{6(1)}} = \2238.65 , so \$3000 is better deal
- Which is the better deal, to receive \$2000 now, or to receive \$3000 six years from now? (Assume an annual compound interest rate of 8%, compounded annually.) $\frac{3000}{\left(1 + \frac{.08}{1}\right)^{6(1)}} = \1890.51 , so \$2000 now is better deal
- We wish to buy a used car for \$5000. The dealership has a finance plan of \$500 down payment and 36 monthly payments with an APR of 6%. Find the monthly payment under this plan. $\$136.90$
- We wish to buy a used car for \$7500. The dealership has a finance plan of \$500 down payment and 48 monthly payments of \$161.20. Find the APR that the bank charges. 5%
- We have 15 marbles in a bag: 9 blue, 5 green, and 1 yellow. We randomly pull two marbles, without replacement. Find the probability of each of the following events.
 - We pull two marbles of different colors. $\frac{59}{105}$
 - We pull at least one green marble. $\frac{4}{7}$
- We have 15 marbles in a bag: 9 blue, 5 green, and 1 yellow. We randomly pull two marbles, with replacement. Find the probability of each of the following events.
 - We pull two marbles of the same color. $\frac{107}{225}$
 - We pull at least one green marble. $\frac{5}{9}$
- Three sides of a trapezoid are given: the non-parallel sides are 25 cm and 40 cm long. the longer parallel side is 49 cm. The height of the trapezoid is 24 cm.
 - Find the missing side of the trapezoid. 10 cm
 - The trapezoid is the base of a 15 cm high solid. Find the volume. 10620 cm^3

(c) The trapezoid is the base of a 15 cm high pyramid. Find the volume. 3540 cm^3

9. The ratio of cats to dogs was 10 to 21.

(a) If there was 420 dogs, how many cats were there? 200

(b) If there was 420 cats, how many dogs were there? 882