

36 37

Example 4.3

• Let r=0.1. Find the value of \$100 after 1 year with periodic compounding and m=1, 2, 4, 12, 52, 365.

• How long does it take to double a capital attracting interest at 6% daily?

• What is r if a deposit subject to annual compounding is doubled after 10 years?

Example 4.3 (continued)

 How long will it take to earn \$1 if r=0.1 (a.c.) and V(0)=1 cent?

 Pay \$1000 every year after 1, 2, and 3 years. What is the present value of this payment stream? Use annual compounding at 25%.

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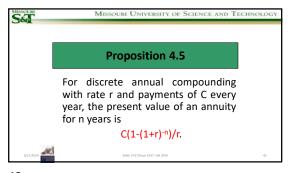
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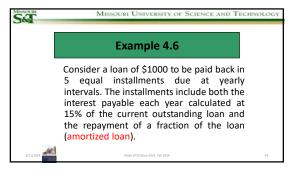
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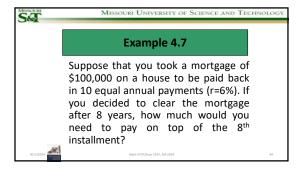
Definition 4.4

An annuity is a sequence of finitely many payments of a fixed amount due at equal time intervals.

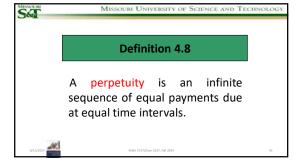
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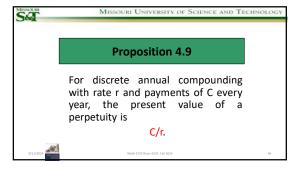


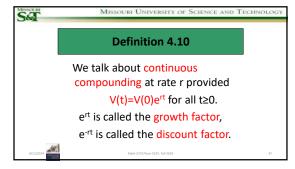




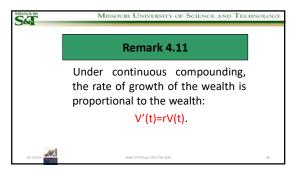
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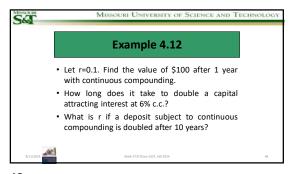


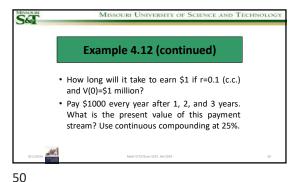




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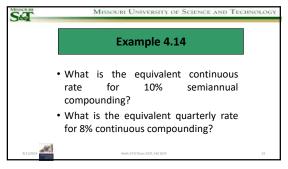


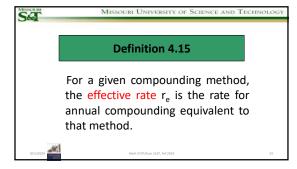
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Definition 4.13

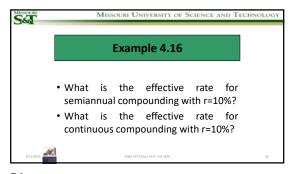
 Two compounding methods are called equivalent if the corresponding growth factors over a period of one year are the same.

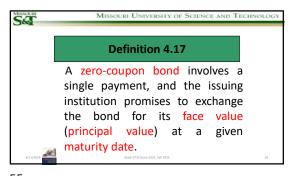
 If one of the growth factors is bigger, then that method is called preferable.

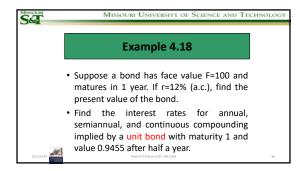




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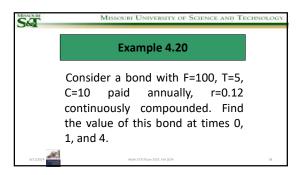


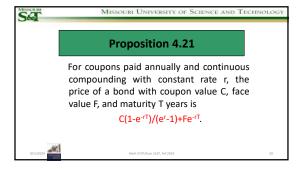


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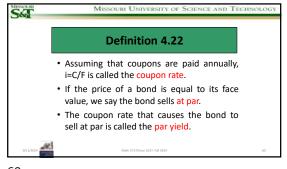
Definition 4.19

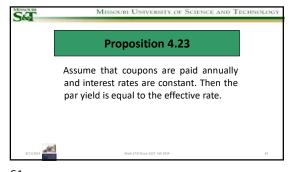
A coupon bond promises a sequence of payments, consisting of the face value paid at maturity and coupons paid regularly, the last coupon being due at maturity.

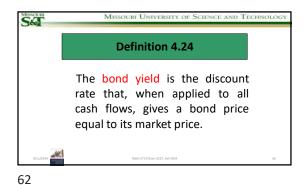




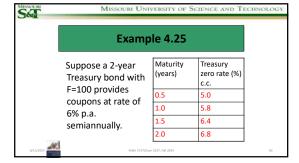
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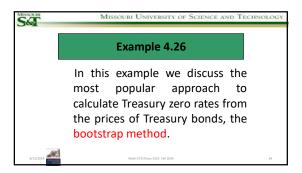


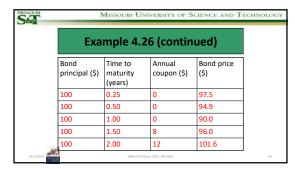




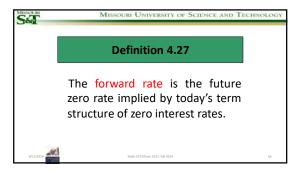
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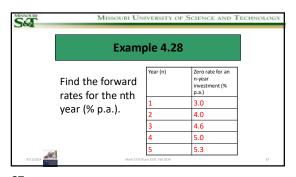


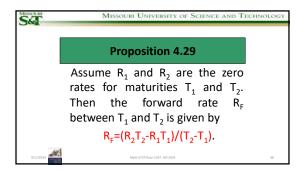




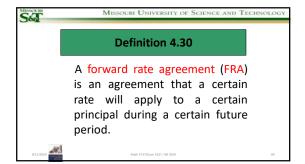
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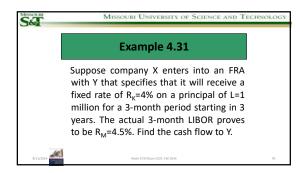


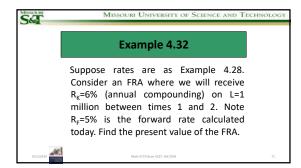




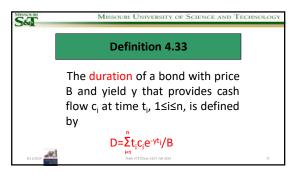
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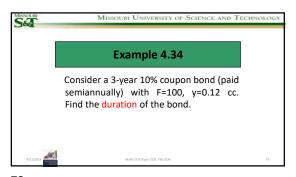


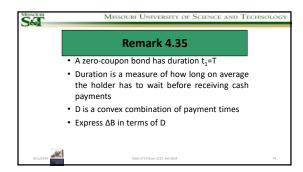




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