

Problem Set 9

1) PT

$r = 7\%$ (still rate on mortgages)

$$PMT = -\$899$$

$$PV = \$100,000$$

$$n = 180 \text{ (makes sense, no prepaids)}$$

Value of PT

$$N = 180$$

$$PMT = -\$899$$

$r = 8\%$ (Use this rate to value, because it's the market rate you can get on newly issued PT's, so this one must pay like them)

$$PV = \$94,071.89$$

Value of Annuity (Regular Bond)

$N = 170$ > Doesn't change, regular bonds don't change n

$$PMT = 930$$

$$r = 8\%$$

$$PV = \$97,417.58$$

PT falls more

Problem Set 9

$$2) \quad r = 7\%$$

$$PMT = -(899 + 51) = -950$$

$$PV = 100,000$$

$$n = 163.67 \longrightarrow 164$$

Value of PT

$$PMT = -950$$

$$n = 164$$

$$r = 6\%$$

$$PV = \$106,146.83$$

Value of Bond

$$n = 170$$

$$pmt = -930$$

$$r = 6\%$$

$$PV = \$106,332.27$$

PT doesn't rise as much as regular bond