LESSON MAKER PRO

Mortgage Matchups

Compare monthly payments when loan choices change.

HIGH SCHOOL · MM.FPM.A.7.b

MM.FPM.A.7.b "Compare monthly mortgage payments for different terms, interest rates, and down payments."

NAME _____ DATE _____

ESTIMATE THE PAYMENT

Subtract the down payment from the home price. Divide the amount borrowed by $1,000, then multiply by the monthly factor. Use these rounded factors per $1,000 borrowed: 30 years at 4%, $5; 30 years at 6%, $6; 15 years at 4%, $7; 15 years at 6%, $8. The estimates include principal and interest, but not taxes or insurance.

WORKED EXAMPLE

A home costs $135,000, and the down payment is $25,000. For a 20-year mortgage at 5%, use a monthly factor of $6.60 per $1,000 borrowed. Estimate the monthly payment.

1. Amount borrowed: $135,000 - $25,000 = $110,000.
2. Thousands borrowed: $110,000 / $1,000 = 110.
3. Monthly payment: 110 * $6.60 = $726.

Answer: $726 per month

PRACTICE 6 problems

1 A home costs $120,000, with $20,000 down. Estimate the monthly payment for a 30-year mortgage at 4%.

ANSWER _____

2 A home costs $150,000, with $50,000 down. Estimate the monthly payment for a 15-year mortgage at 6%.

ANSWER _____

3 A home costs $240,000, with $40,000 down. At 4%, how much more per month is the 15-year mortgage than the 30-year mortgage?

ANSWER _____

4 A home costs $160,000, with $40,000 down. For a 30-year mortgage, how much more per month is the payment at 6% than at 4%?

ANSWER _____

5 A home costs $200,000. Estimate the monthly payments for a 30-year mortgage at 6% with (a) $20,000 down and (b) $60,000 down.

ANSWER _____

6 A home costs $300,000, with $50,000 down. Which has the lower monthly payment, a 15-year mortgage at 4% or a 30-year mortgage at 6%? By how much?

ANSWER _____

APPLY IT Show your work

1 After graduation, Maya plans to buy a $220,000 starter condo. She can put down either $20,000 or $40,000. With a 30-year mortgage at 4%, how much would the larger down payment lower her estimated monthly payment?

WORK SPACE

ANSWER _____

2 Jordan is budgeting for a $250,000 home with $50,000 down. Jordan can afford at most $1,200 per month for principal and interest. Which option fits that limit: a 15-year mortgage at 6%, a 30-year mortgage at 4%, or both?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Two plans could finance a $280,000 home. Plan A puts $80,000 down and uses a 30-year mortgage at 6%. Plan B puts $120,000 down and uses a 15-year mortgage at 4%. Which plan has the lower estimated monthly payment, and why can the shorter mortgage cost less per month here? Show both calculations and explain in two sentences.

WORK SPACE AND ANSWER

ANSWER KEY

Mortgage Matchups

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A home costs $120,000, with $20,000 down. Estimate the monthly payment for a 30-year mortgage at 4%.	**$500 per month**
2	A home costs $150,000, with $50,000 down. Estimate the monthly payment for a 15-year mortgage at 6%.	**$800 per month**
3	A home costs $240,000, with $40,000 down. At 4%, how much more per month is the 15-year mortgage than the 30-year mortgage?	**$400 more per month**
4	A home costs $160,000, with $40,000 down. For a 30-year mortgage, how much more per month is the payment at 6% than at 4%?	**$120 more per month**
5	A home costs $200,000. Estimate the monthly payments for a 30-year mortgage at 6% with (a) $20,000 down and (b) $60,000 down.	**(a) $1,080 per month; (b) $840 per month**
6	A home costs $300,000, with $50,000 down. Which has the lower monthly payment, a 15-year mortgage at 4% or a 30-year mortgage at 6%? By how much?	**The 30-year mortgage at 6%, by $250 per month**

PART 2 · APPLY IT

1. **$100 per month** The two loan amounts are $200,000 and $180,000, giving monthly estimates of 200 * $5 = $1,000 and 180 * $5 = $900. The difference is $100.
2. **Only the 30-year mortgage at 4% fits the limit.** Jordan would borrow $200,000. The 15-year estimate is 200 * $8 = $1,600 per month, while the 30-year estimate is 200 * $5 = $1,000 per month.

CHALLENGE

Plan B costs ($280,000 - $120,000) / $1,000 * $7 = $1,120 per month, while Plan A costs ($280,000 - $80,000) / $1,000 * $6 = $1,200 per month. Plan B's larger down payment reduces the amount borrowed enough to make its monthly payment $80 lower.

All payments are estimates based on the worksheet's rounded factors. Accept equivalent calculations that use the correct amount borrowed and factor.