

Payment Plan Math

Use payment plans to find the real price.

HIGH SCHOOL • MA.912.FL.3.8

MA.912.FL.3.8 "Calculate using spreadsheets and other technology the total cost of purchasing consumer durables over time given different monthly payments, down payments, financing options and fees."

NAME _____

DATE _____

FIND THE TOTAL COST

To find the total cost of a financed purchase, add the down payment, all monthly payments, and any fees. In a spreadsheet, use the formula $\text{=down payment} + (\text{monthly payment} \times \text{number of months}) + \text{fees}$. A lower monthly payment can cost more if the plan lasts longer or has higher fees.

WORKED EXAMPLE

A smart watch requires a \$125 down payment, 14 monthly payments of \$36, and a \$19 financing fee. Find the total cost.

- $14 \times 36 = 504$
- $125 + 504 = 629$
- $629 + 19 = 648$

Answer: \$648

PRACTICE 6 problems

- 1** Wireless headphones require an \$84 down payment, 7 monthly payments of \$43, and a \$16 fee. Find the total cost.

ANSWER _____

- 2** A desk requires a \$132 down payment, 9 monthly payments of \$48, and a \$21 fee. Find the total cost.

ANSWER _____

- 3** A gaming chair requires a \$96 down payment, 4 monthly payments of \$68, and an \$11 fee. Find the total cost.

ANSWER _____

- 4** Compare two plans for a monitor. Store A requires \$72 down, 6 monthly payments of \$59, and a \$13 fee. Store B requires \$72 down, 10 monthly payments of \$39, and a \$25 fee. Find both total costs and identify the lower-cost plan.

ANSWER _____

- 5** A tablet plan has no down payment, 15 monthly payments of \$34, and a \$20 fee. Find the total cost.

ANSWER _____

- 6** A washing machine requires a \$160 down payment, 5 monthly payments of \$74, and a \$28 fee. Find the total cost.

ANSWER _____

APPLY IT Show your work

- 1** Jordan wants an electric scooter for traveling to school and work. In a spreadsheet, Jordan compares two financing plans. The short plan requires \$215 down, 8 monthly payments of \$88, and a \$27 fee. The long plan requires \$215 down, 16 monthly payments of \$53, and a \$61 fee. Find each total cost. Which plan costs less, and by how much?

WORK SPACE

ANSWER _____

- 2** Maya is buying a video camera to record auditions and school events. An online store offers a plan with \$175 down, 11 monthly payments of \$57, and a \$23 fee. A local store offers a plan with \$95 down, 7 monthly payments of \$96, and a \$31 fee. Find each total cost and choose the cheaper plan.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A digital piano has two financing plans. Plan A requires \$286 down, 12 monthly payments of \$55, and a \$44 fee. Plan B requires \$286 down, 8 monthly payments of x dollars, and a \$32 fee. What must x be for both plans to have the same total cost? Write an equation and solve.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Wireless headphones require an \$84 down payment, 7 monthly payments of \$43, and a \$16 fee. Find the total cost.	\$401
2	A desk requires a \$132 down payment, 9 monthly payments of \$48, and a \$21 fee. Find the total cost.	\$585
3	A gaming chair requires a \$96 down payment, 4 monthly payments of \$68, and an \$11 fee. Find the total cost.	\$379
4	Compare two plans for a monitor. Store A requires \$72 down, 6 monthly payments of \$59, and a \$13 fee. Store B requires \$72 down, 10 monthly payments of \$39, and a \$25 fee. Find both total costs and identify the lower-cost plan.	Store A: \$439. Store B: \$487. Store A costs \$48 less.
5	A tablet plan has no down payment, 15 monthly payments of \$34, and a \$20 fee. Find the total cost.	\$530
6	A washing machine requires a \$160 down payment, 5 monthly payments of \$74, and a \$28 fee. Find the total cost.	\$558

PART 2 • APPLY IT

- Short plan: \$946. Long plan: \$1,124. The short plan costs \$178 less.** Multiply each monthly payment by its number of months, then add the down payment and fee. Compare \$946 and \$1,124.
- Online store: \$825. Local store: \$798. The local store plan is cheaper by \$27.** For each store, add the down payment, the total of all monthly payments, and the fee. Subtract \$798 from \$825 to find the difference.

CHALLENGE

$286 + 12(55) + 44 = 286 + 8x + 32$, so $x = \$84$ per month.

Accept equivalent calculation expressions and totals written with or without dollar signs. For comparison items, students should state both totals and the correct cost difference.