

Purchase Choice Math

Compare the total cost and timing of different ways to buy.

HIGH SCHOOL • MA.912.FL.3

MA.912.FL.3 "Describe the advantages and disadvantages of short-term and long-term purchases."

NAME _____

DATE _____

COMPARE TOTAL COSTS

To compare purchase choices, find the total amount paid for each option. A longer payment plan can lower the payment due now but may cost more overall. Paying cash or using a shorter plan can cost less, but it requires more money sooner.

WORKED EXAMPLE

A game console costs \$330 in cash or 8 monthly payments of \$45. Which choice costs less, and by how much?

1. Find the payment-plan total: $8 \times \$45 = \360 .
2. Compare the totals: $\$360 - \$330 = \$30$.
3. The cash price is lower.

Answer: Paying \$330 in cash costs \$30 less.

PRACTICE 6 problems

- 1** A pair of headphones costs \$240 in cash or 6 payments of \$43. What is the total cost of the payment plan, and how much more does it cost than cash?

ANSWER _____

- 2** A bike costs \$320 in cash. A payment plan requires a \$75 down payment and 5 payments of \$52. What is the payment-plan total, and which option costs less?

ANSWER _____

- 3** A tablet costs \$225 in cash or 9 payments of \$28. Find the total paid with the payment plan and the extra cost.

ANSWER _____

- 4** A store offers a camera for \$410 in cash or 12 payments of \$37. Which option has the lower total cost, and by how much?

ANSWER _____

- 5** A student can buy a camera for \$180 in cash or 3 payments of \$67. Which option costs less? State one disadvantage of the cheaper option.

ANSWER _____

- 6** A shorter plan has 4 payments of \$88. A longer plan has 11 payments of \$35. Which plan has the lower total cost, and how much higher is its monthly payment?

ANSWER _____

APPLY IT Show your work

- 1** Maya wants a laptop for school and creative projects. She can pay \$540 in cash, or she can pay a \$120 down payment plus 7 monthly payments of \$64. How much does each choice cost? Which choice costs less, and what is one advantage of the payment plan?

WORK SPACE

ANSWER _____

- 2** Jordan is choosing how to buy a used car for a job and school commute. The car costs \$1,800 in cash, or Jordan can pay \$300 down and 15 biweekly payments of \$110. Find the total cost of each option. How much would Jordan save by paying cash, and what is one disadvantage of paying cash?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A phone can be bought in one of three ways: pay \$720 in cash, pay a \$150 down payment plus 9 monthly payments of \$67, or make 12 monthly payments of \$61 with no down payment. You have \$100 available now and can pay no more than \$65 each month. Which option fits your budget? Find its total cost and explain how much more it costs than the least-cost option.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A pair of headphones costs \$240 in cash or 6 payments of \$43. What is the total cost of the payment plan, and how much more does it cost than cash?	\$258 total, which is \$18 more than cash.
2	A bike costs \$320 in cash. A payment plan requires a \$75 down payment and 5 payments of \$52. What is the payment-plan total, and which option costs less?	The payment-plan total is \$335. Paying cash costs \$15 less.
3	A tablet costs \$225 in cash or 9 payments of \$28. Find the total paid with the payment plan and the extra cost.	The payment-plan total is \$252, so it costs \$27 more than cash.
4	A store offers a camera for \$410 in cash or 12 payments of \$37. Which option has the lower total cost, and by how much?	Paying \$410 in cash has the lower total cost by \$34.
5	A student can buy a camera for \$180 in cash or 3 payments of \$67. Which option costs less? State one disadvantage of the cheaper option.	Cash costs less, \$180 compared with \$201. A disadvantage is that the full \$180 must be paid at the time of purchase.
6	A shorter plan has 4 payments of \$88. A longer plan has 11 payments of \$35. Which plan has the lower total cost, and how much higher is its monthly payment?	The shorter plan costs less, \$352 compared with \$385. Its monthly payment is \$53 higher.

PART 2 • APPLY IT

- Cash costs \$540. The payment plan costs \$568, so cash costs \$28 less. An advantage of the payment plan is that Maya pays less money at the start and can use the laptop sooner.** Compute the plan total: $\$120 + 7 \times \$64 = \$568$. Compare \$568 with \$540, then identify the lower upfront cost as an advantage of the plan.
- Cash costs \$1,800. The payment plan costs \$1,950, so paying cash saves \$150. A disadvantage of paying cash is that Jordan must have the full \$1,800 available right away.** Compute the plan total: $\$300 + 15 \times \$110 = \$1,950$. Subtract \$1,800 from \$1,950 to find the savings from cash.

CHALLENGE

The 12-payment option fits the budget because it needs no down payment and costs \$61 per month. Its total cost is \$732. The least-cost option is \$720 cash, so the budget-fitting option costs \$12 more.

Accept equivalent currency notation and correctly computed totals. For stated advantages or disadvantages, accept any accurate statement about lower upfront cost, higher total cost, or needing more money immediately.