

Name: _____

Date: _____

A company sells small and large photo books. Each page of a small photo book costs the same. The table shows the relationship between the number of pages in a small photo book and the total cost of the photo book.

Number of Pages	Total Cost (\$)
20	30
32	48
	57

PART A

What is the cost per page for a small photo book? Enter your answer in the box.

\$

PART B

How many pages are in a small photo book that costs \$57? Show or explain how you determined your answer.



Enter your answer and explanation in the space provided.

PART C

Each page of a large photo book costs 30% more than each page of a small photo book. What is the cost for a large photo book with 35 pages? Show or explain how you determined your answer.



Enter your answer and explanation in the space provided.

ANSWER KEY

Rubric Part A	
Score	Description
1	<p>Student response includes the following element.</p> <ul style="list-style-type: none"> • Computation component = 1 point <ul style="list-style-type: none"> ○ The student provides a response of 1.50 or equivalent
0	Student response is incorrect or irrelevant.
Rubric Part B	
Score	Description
2	<p>Student response includes each of the following 2 elements.</p> <ul style="list-style-type: none"> • Computation component = 1 point <ul style="list-style-type: none"> ○ The student provides a response of 38 pages • Modeling component = 1 point <ul style="list-style-type: none"> ○ The student provides a correct modeling process to determine the number of pages in a small photo book costing \$57. <p>Sample Student Response: “The cost per page is \$1.50. So a book costing \$57 would have $57 / 1.50 = 38$ pages.”</p> <p>Notes:</p> <ul style="list-style-type: none"> • The student may receive a computation point for calculating the number of pages for a small photo book when the answer is based on the incorrect price per page from Part A. • The student may receive a modeling point for applying a correct strategy to find the number of pages for a small photo book based on an incorrect price per page.
1	Student response includes 1 of the above elements.
0	Student response is incorrect or irrelevant.
Rubric Part C	
Score	Description
2	<p>Student response includes each of the following 3 elements.</p> <ul style="list-style-type: none"> • Computation component = 1 point <ul style="list-style-type: none"> ○ The student determines a correct cost of \$68.25. • Modeling component = 1 point <ul style="list-style-type: none"> ○ The student provides a correct modeling process to determine the cost per page for a large photo book. • Modeling component = 1 point <ul style="list-style-type: none"> ○ The student provides a correct modeling process to determine the cost for a large photo book with 35 pages. <p>Sample Student Response: “The cost per page for a large photo book is 30% more than the cost per page of a small photo book. So, the cost per page is $\\$1.50 \times 1.3 = \\1.95.”</p> <p>“The cost for a large photo book with 35 pages is $35 \times \\$1.95 = \\68.25.”</p>

	<p>Notes:</p> <ul style="list-style-type: none"> • The student may receive a computation point for calculating the cost of a large photo book when the answer is based on the incorrect price per page for a small photo book from Part A. • The student may receive a modeling point for applying a correct strategy to find the price per page for a large photo book based on an incorrect price per page for the small photo book. • The student may receive a modeling point for applying a correct strategy to find the total cost for a large photo book based on an incorrect price per page. <p>Further Notes:</p> <ul style="list-style-type: none"> • The student may solve these using alternate methods and receive computation and modeling points for correct computations and modeling processes. • The student may receive a combined total of 3 points if the modeling processes are correct but the student makes one or more computational errors in Parts B and C resulting in incorrect answers or an incorrect conclusion. • The student may receive up to a total of 3 points if he or she computes the correct answers but shows no work or insufficient work to indicate correct modeling processes. • The student cannot receive more than 2 points for modeling if the explanations, while sufficient to indicate that the student had correct reasoning, contain nonsense statements.
1	Student response includes 2 of the above elements.
0	Student response includes 1 of the above elements or is incorrect or irrelevant

Glow	Grow