

Name _____ ANSWER KEY _____ School Team _____

Event 2: Problem Solving (with calculators) 5th/6th grade Math Meet '08

Computer hard drives were first invented in 1955. Back then, a 12 MB hard drive cost \$74,800.

The following chart shows how much hard drives have cost since then.

<u>Year</u>	<u>Size</u>	<u>Cost</u>
1985	140 MB	\$4395
1990	702 MB	\$2295
1995	4,200 MB	\$1425
2000	61,400 MB	\$395
2005	250,000 MB	\$219

(Source: John C. McCallum, retired computer science professor, www.jcmit.com)

Use the information above to answer the following questions. Assume that the cost per MB doesn't depend on how large a hard drive you buy.

Part 1: 1955 (2 pts. each)

How much would each size hard drive listed above have cost in 1955?
(Round your answers to the nearest dollar.)

<u>Year</u>	<u>Size</u>	<u>Cost</u>
1955	140 MB	\$872,667
1955	702 MB	\$4,375,800
1955	4,200 MB	\$26,180,000
1955	61,400 MB	\$382,726,667
1955	250,000 MB	\$1,558,333,333

Here again is the chart showing the history of hard drive prices.

<u>Year</u>	<u>Size</u>	<u>Cost</u>
1985	140 MB	\$4395
1990	702 MB	\$2295
1995	4,200 MB	\$1425
2000	61,400 MB	\$395
2005	250,000 MB	\$219

(Source: John C. McCallum, retired computer science professor, www.jcmit.com)

Use the information above to answer the following questions. Assume that the cost per MB doesn't depend on how large a hard drive you buy.

Part 2: 12 MB (3 pts. each)

How much would 12 MB, the size of the first hard drive, cost in each of the years listed? (Round your answers to the nearest penny.)

<u>Year</u>	<u>Size</u>	<u>Cost</u>
1985	12 MB	\$376.71
1990	12 MB	\$39.23
1995	12 MB	\$4.07
2000	12 MB	\$0.07
2005	12 MB	\$0.01