

BLUE PRINT

QUESTION



What is the relationship between the mass of a projectile and the horizontal distance that it travels? Assume constant initial force and angle of launch.

VARIABLE ANALYSIS

TABLE

mass of dart	Angle of launch	Initial force	Distance traveled	model of Gun
IV ✓	CV ✓	CV ✓	DV ✓	CV ✓

Independent Variable: the mass of the object will change by adding pennies to the darts.

Dependent Variable: The distance will change because of the different weights. Measured in meters.

Constant Variable: The angle of launch, initial force, and model of gun will all stay constant.

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

MATERIAL LIST

OBJECT

COST & HOW MANY TO GET IT

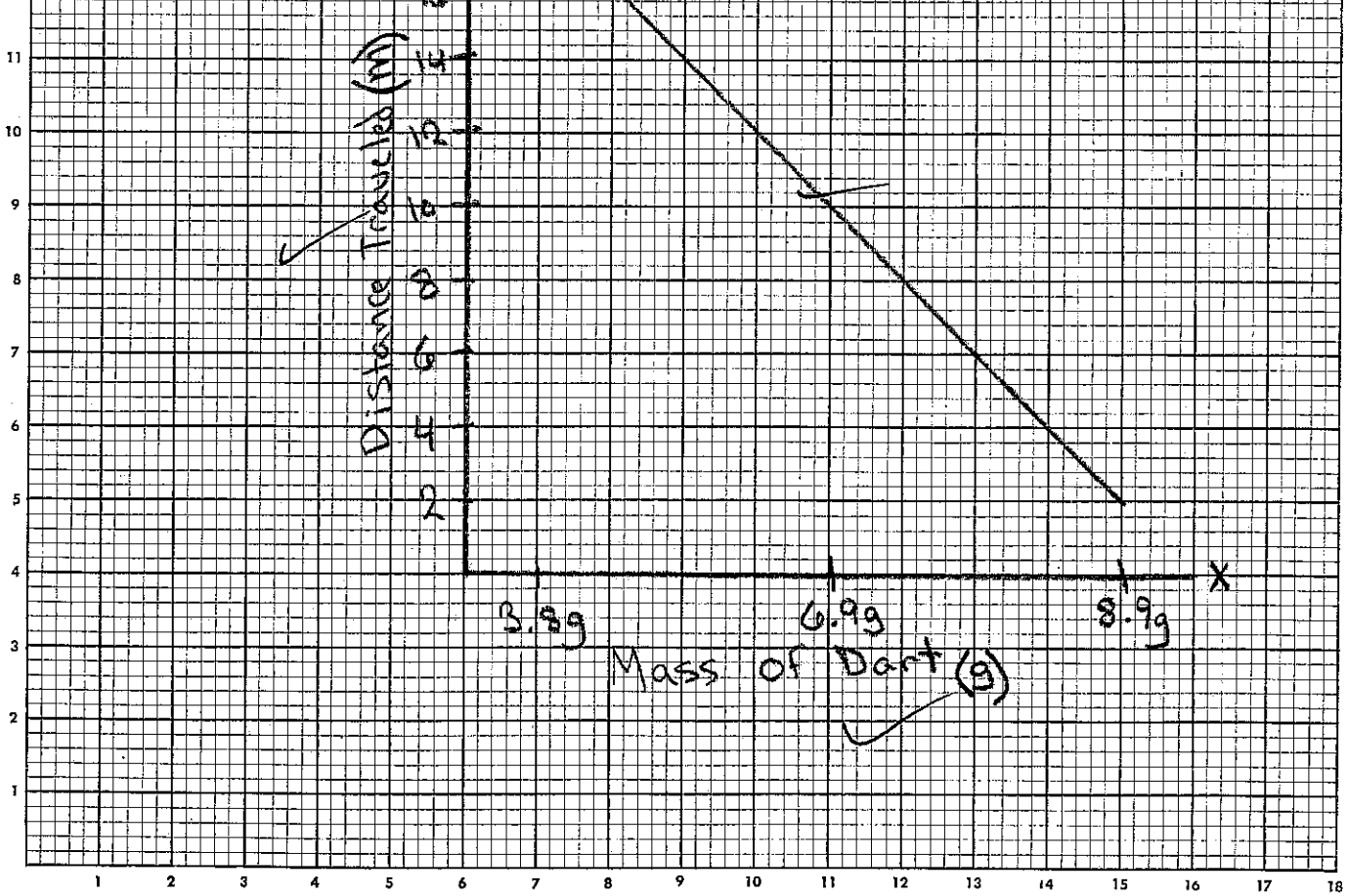
WHERE TO GET IT

WHAT IT'S FOR

21					
20		GUN	\$0 / Only need 1	From my Closet	Shoots Darts
19		DARTS	\$0 / need 3	Comes with Gun	Object that gets shoot
18		METER STICK	\$0 / need 1	Mr. Miller Class Room	Measure the Distance darts travel
17		SCALE	\$0 / need 1	Mr. Miller Class Room	Weights the darts
16		BOARD	\$0 / need 1	From My Barn	Hold Gun In Position
15		PENNIES	6¢ / need 6	From My Piggy Bank	Add Weight to Darts

HYPOTHETICAL GRAPH

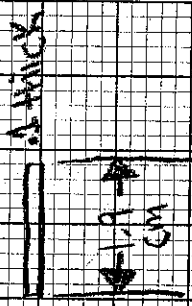
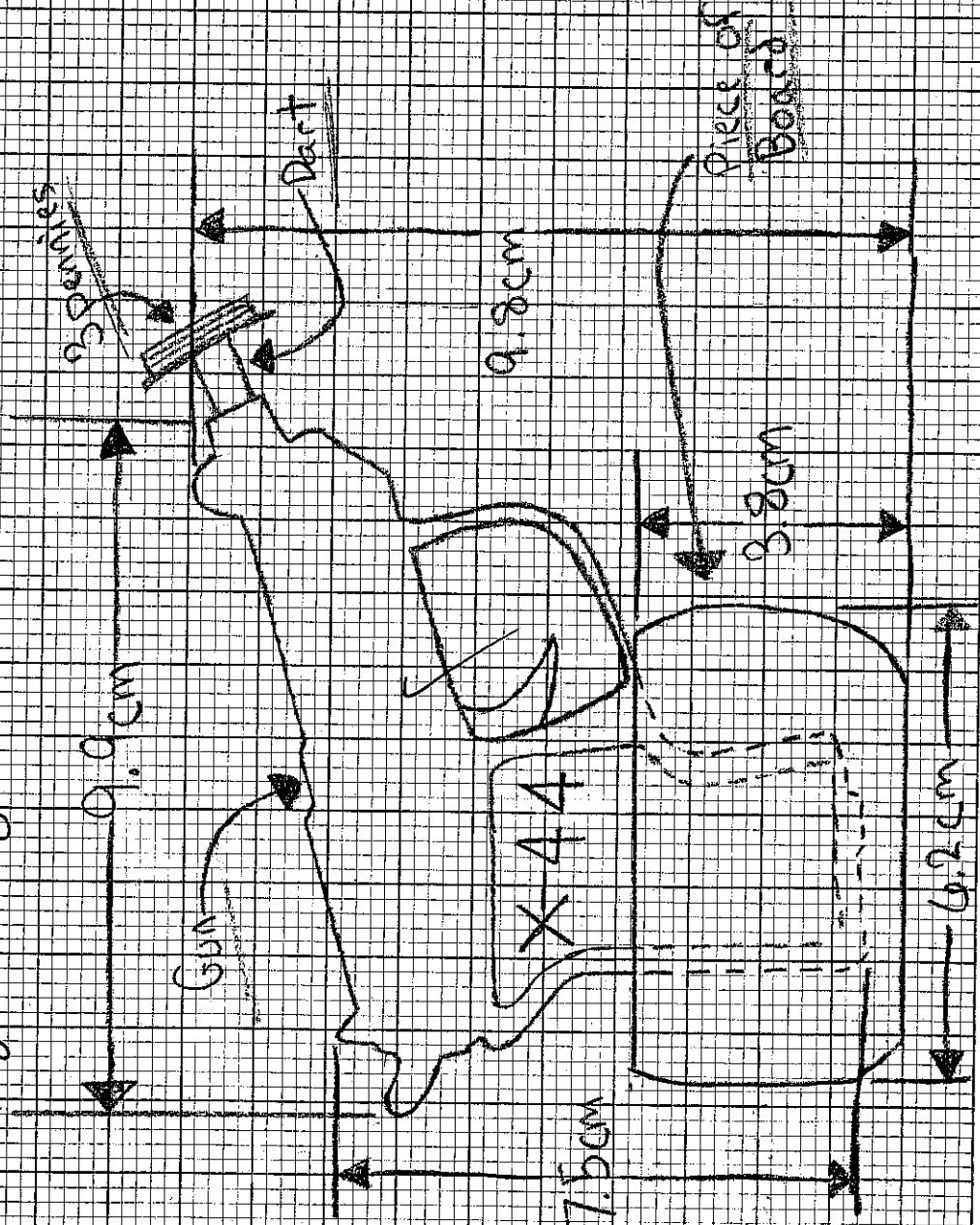
MASS VS. DISTANCE



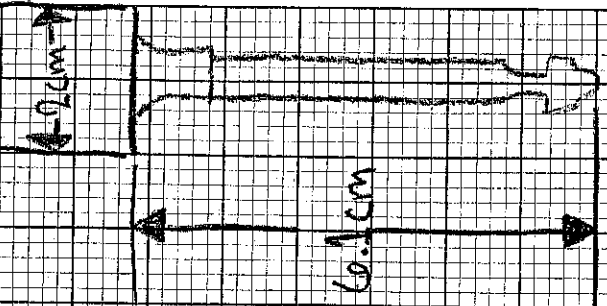
DIAGRAM

NOTE: All though I don't know the velocity it stays constant. Also the Angle of LAUNCH stays at 16°

Very speed
direction



DART DIMENSION



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

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