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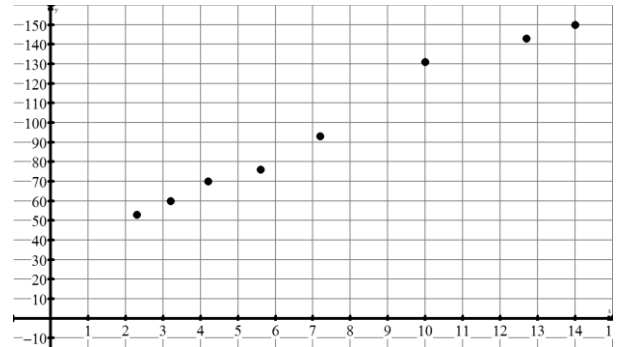
Title:

(A) Fast Five

- Mr S has proposed the following ALGEBRAIC model for the marble activity $\rightarrow d = 8.75h + 35$, provided that the ramp height does not exceed 15 cm
- (1) What does d represent?
- (2) What does h represent?
- (3) **What does the 8.75 represent/mean???**
- (4) Why is it important that the ramp height does not exceed 15 cm?
- (5) Solve for h if $d = 73.6 \rightarrow$ i.e Solve $73.6 = 8.75h + 35 \rightarrow$ what does your solution mean?
- (6) Solve for d if $h = 5.0 \text{ cm} \rightarrow$ Solve $d = 8.75(5.0) + 35 \rightarrow$ what does your solution mean?
- Recall our Marble Activity \rightarrow Consider the following data set:

Ramp Height (cm)	2.3	3.2	4.2	5.6	7.2	10	12.7	14
Distance Travelled (cm)	53	60	70	76	93	131	143	150

- From this data, we can put together a variety of MODELS to help us analyze and understand the data:
- (1) Equation: $d = 8.75h + 35$
- (2) Graph:
- (3) Number Analysis:



(B) Explorations/Development

- See [Worksheet](#)
- From the questions you have worked through, WRITE A GENERAL RULE that other students can use to solve linear equations
- RULE: \rightarrow

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(C) Key Terms/Key Ideas for Solving Two Step Equations

- **PROPERTIES OF EQUALITY**
- If a , b , and c represent any real numbers then:
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 - (1) If $a = b$ then $a + c = b + c \rightarrow$ (Equals added to equals are equal.)
 - (2) If $a = b$ then $a - c = b - c \rightarrow$ (Equals subtracted from equals are equal.)
 - (3) If $a = b$ then $c \times a = c \times b \rightarrow$ (Equals multiplied by equals are equal.)
 - (4) If $a = b$ then $a/c = b/c$ (if c is not 0) \rightarrow (Equals divided by equals are equal.)
- These properties lead us to follow one basic rule when manipulating equations – **what you do to one side of the equality you must do to the other side.**

(D) Examples/Classwork

- See [Worksheet](#)

(E) Homework/Resources

- Help from PurpleMath.com \rightarrow <http://www.purplemath.com/modules/solvein.htm>
- Help from The Math Page \rightarrow <http://www.themathpage.com/alg/equations.htm>
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- List the relevant textbook pages/workpages and questions that reinforce the skills/concepts of the lesson