# Independent and Dependent Variables

Warm-Up

Classwork:
Halloween Activity

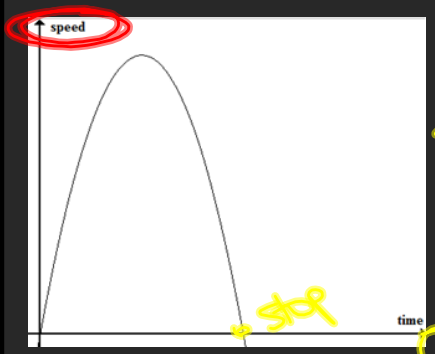
Notes:
Identifying Independent and Dependent Variables

Assignment:

Practice #1-3

# Warm-Up

1. The graph below best represents which of the following relationships between speed and time elapsed?




A. Carol rides her bike steadily up the street and then takes a break and then quickly rides back

B. A woman climbs a hill at a steady pace and then starts to run down one side.

C. Mike runs up a hill and then runs back down the hill.

D. Bill rode his bicycle down a hill and then slowly came to a stop.

2. If <A and <B are complementary and the measure of <A is 4 more than twice the measure of <B, what is the measure of <A?

A = 4+2X
B = X

$\frac{4+2X}{A} + \frac{X}{B} = 90$

$4+3X = 90$
$-4 \quad -4$
$\frac{3X}{3} = \frac{86}{3}$
$X = 28.7$

$90 - 28.7$
$61.3°$

# Richardson High School

## October 15th, 2014

**9TH – 11TH**

**Room assignments will be posted across from the cafeteria.*

Get there by 8:55

| | |
|---|---|
| 9:00 – 12:20 | **PSAT** |
| 12:20 – 12:50 | Lunch (sack lunch/stay in same room) |
| 1:00 – 1:45 | 1st Period |
| 1:50 – 2:40 | 2nd Period |
| 2:45 – 3:30 | 3rd Period |
| 3:35 – 4:10 | 4th Period |

On page 33 & 34, set up unit 3 in your notebook.

Put your "3" tab on page 33 (fold along the dotted line)




TITLE:

Introduction to Linear Functions

On page 33 & 34, set up unit 3 in your notebook.

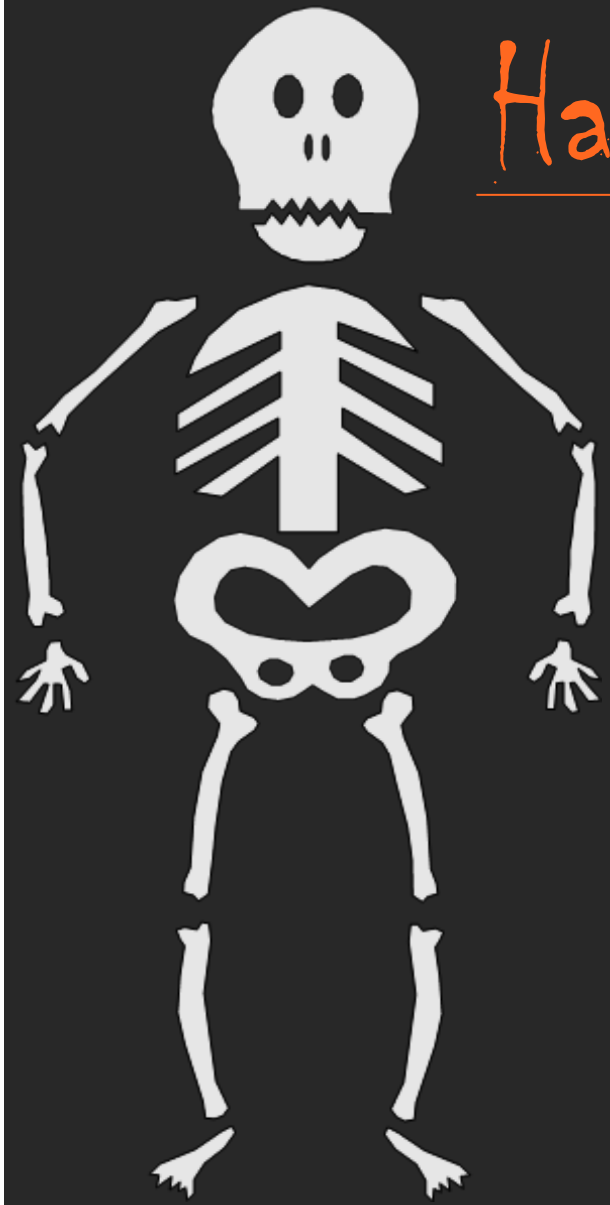
Put your "3" tab on page 33 (fold along the dotted line)

34

**Unit 3: Intro to Linear Functions**

Unit 3 Words Worth Knowing

- Function
- Independent
- Dependent
- Input
- Output
- Function Notation
- Relation
- Table
- Mapping
- Graph
- Vertical Line Test
- Rate of Change
- Slope
- HOY VUX
- Pretty Points
- Slope Formula
- X-intercept
- Y-intercept
- Solution
- Slope-Intercept Form
- Translation
- Linear Inequality
- Solution Set



# Halloween Fundraiser

The school's drill team has decided to host a fundraiser in October to raise enough money to put on a Haunted House for the local children's hospital.

They plan to sell ghost pops and tombstone cookies during each lunch the week of Halloween.

**Write on a sticky note:**
**What factors might affect the success of this money-making project?**


Halloween Fundraiser
FACTORS:
advertisement
health (allergic)
cost/selling price
amount of product
location
timing
attitude

# Identifying Independent/Dependent

Essential Question: How do I identify the dependent variable in a relationship?

## WHAT IS A FUNCTION? p.35

The American Heritage Dictionary of the English Language defines **function** as something closely related to another thing and dependent upon it for its existence, value, or significance.

"Something is related to another"

Example of Function:

How fast I wake up in the morning depends on how many times I hit snooze.

Independent:

*what can you change more easily?

CAUSE

# times hit snooze

Dependent:

*what changes because of the independent

EFFECT

When I wake up

2

**In teams, you will have 5 minutes to come up with 5 examples of dependent relationships.**

FUNCTION

You will write your 2 dependent relationships on a sheet of paper and write your table # and period

then hang them up around the classroom.

You will now have 5 minutes to walk around the room and investigate the relationships that other teams found!

QUESTIONS:
1. Does the relationship make sense?
2. Have they correctly identified the independent variable


# TEST AVERAGES

2ND - 61

3RD - 65

4TH - 64

5TH - 62

## TEST CORRECTION OPPORTUNITIES

### DUE BY 5PM WEDNESDAY 10/22

| MON | TUES | WED | THURS | FRI |
|---|---|---|---|---|
| NONE | NONE | IN CLASS PM | AM | AM |
| NONE | AM | AM/PM DUE BY 5:00 | | |

AM - 8:15 - 9 AM

PM - 4:15 - 5PM

## TEKS CHECK TEST (BENCHMARK FROM DISTRICT) TUESDAY 10/21

Algebra I - Unit 3: Topic 1 – Identifying Independent and Dependent

**Practice – Identifying Independent and Dependent** **p 246**

Name _____ Date _____ Period _____

**Determine the independent and dependent variables in the given situations.**

1. How much time I spend on the phone effects how much studying I get done.
   a. Independent Variable:
   b. Dependent Variable:

2. The number of books I read over the summer depends on how much time I spend at the pool.
   a. Independent Variable:
   b. Dependent Variable:

3. The height of a candle decreases $x$ centimeters for every hour it burns.
   a. Independent Variable:
   b. Dependent Variable:

4. Sales tax in the state of Maryland is 5% of the purchase price.
   a. Independent Variable:
   b. Dependent Variable:

5. The fire was very big so many firefighters were there.
   a. Independent Variable:
   b. Dependent Variable:

6. To rent a DVD, a customer must pay $3.99 plus $0.99 for every day that it is late.
   a. Independent Variable:
   b. Dependent Variable:

7. In the winter, more electricity is used when the temperature goes down, and less is used when the temperature rises.
   a. Independent Variable:
   b. Dependent Variable:

Algebra I - Unit 3: Topic 1 – Identifying Independent and Dependent

**Determine the independent and dependent variables in the given situations.**

8. $\frac{3}{4}x - 5 = y$

   a. Independent Variable:

   b. Dependent Variable:

9. $v = \frac{4}{3}\pi r^3$

   a. Independent Variable:

   b. Dependent Variable:

10. During a sale at a shoe store, all shoes were 25% off the original price. Which statement best describes the functional relationship between the sale price of a pair of shoes and the original price?

    A The sale price is dependent on the original price
    B The original price is dependent on the sale price
    C The sale price and the original price are independent of each other
    D The sale price is dependent on the number of pairs of shoes purchased.

**Consider these two variables. Identify them as either independent or dependent. Then complete the sentences.**

11. The number of hours I study  My grade point average

    _____  _____

    _____ depends on _____

    _____ is a function of _____

    _____ determines _____