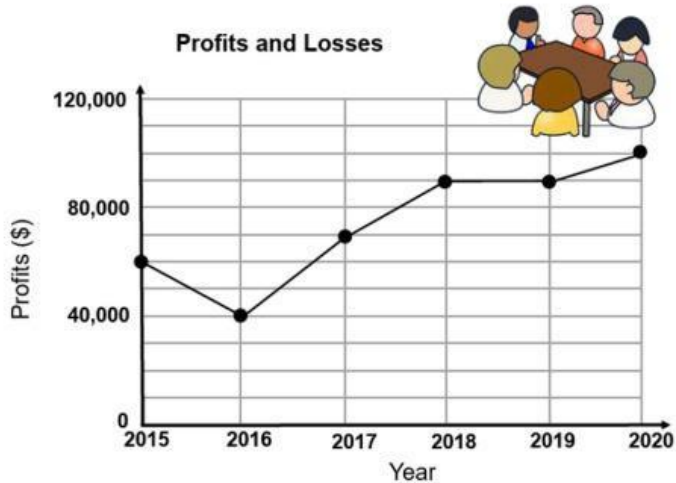


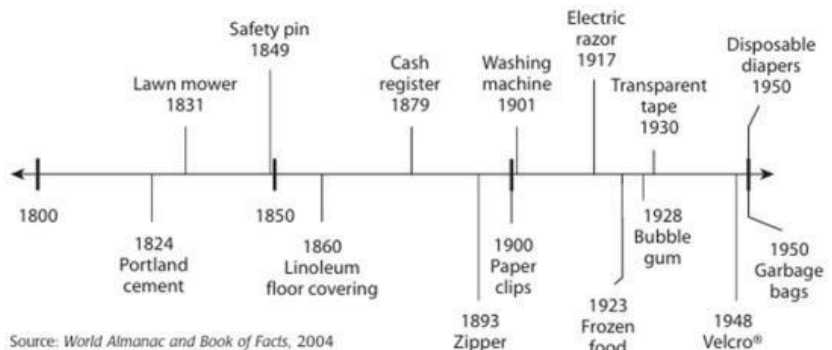
# 8<sup>th</sup> Grade Math Exit Test – Part 3

## Graphs, Charts, Tables, Line Plots, & Time Lines



1. How much did the company earn in 2017? \_\_\_\_\_
2. How much more did the company earn in 2015 than 2016? \_\_\_\_\_
3. How many years did the company earn less than \$80,000? \_\_\_\_\_
4. In which years did the company earn the same amount? \_\_\_\_\_
5. Between which years had the greatest increase in profits? \_\_\_\_\_
6. What is the total profit over the six-year period? \_\_\_\_\_

### The World's Most Important Inventions



1. When was the safety pin invented? \_\_\_\_\_
2. When was frozen food invented? \_\_\_\_\_
3. What important item was invented in 1928? \_\_\_\_\_
4. Paper clips were invented in 1900. How long had linoleum floor covering been available before then? \_\_\_\_\_
5. Name two things invented in 1950. (Hmm, do you think these were coincidental?)  
\_\_\_\_\_  
\_\_\_\_\_

Every New Year's Day, members of the Jacksonport Polar Bear Club gather at the shore of Lake Michigan, strip down to their bathing suits, and plunge into the icy water! Look at the table for details on this zany event. Then answer the questions.



### Polar Bear Plunges (1993–2004)

| Year | Number of Participants | Air Temperature (Fahrenheit) |
|------|------------------------|------------------------------|
| 1993 | 23                     | 4°                           |
| 1994 | 52                     | 33°                          |
| 1995 | 71                     | 18°                          |
| 1996 | 106                    | 22°                          |
| 1997 | 110                    | 25°                          |
| 1998 | 290                    | 34°                          |
| 1999 | 175                    | 10°                          |
| 2000 | 600                    | 33°                          |
| 2001 | 700                    | 26°                          |
| 2002 | 700                    | 30°                          |
| 2003 | 800                    | 28°                          |
| 2004 | 600                    | 32°                          |

Source: Jacksonport Polar Bear Club ([www.doorbell.net/pbc](http://www.doorbell.net/pbc))

1. In which two years did the Polar Bears have the coldest air temperatures for their plunge?  
\_\_\_\_\_
2. In what year did the greatest number of people take part in this event, and in what year did the fewest take the plunge?  
\_\_\_\_\_
3. In general, how has the popularity of this event changed over the years since 1993? Tell how you know.  
\_\_\_\_\_  
\_\_\_\_\_
4. What do you notice about the changes in the number of participants and the air temperatures from 1998 to 1999? Do you think these two factors are related?  
\_\_\_\_\_  
\_\_\_\_\_



# 1 Chart: That's a Long Time!

How long could you sit in a barrel? How long do you think you could live in a tree? People have set many time records doing all kinds of wacky things. Take a look at this chart to learn about a few unusual records. Then answer the questions.

## Longest Time Spent Doing Stuff

| Activity                       | Name of Person(s)                       | Time Spent   |
|--------------------------------|---|--------------|
| Standing in a tub of ice cubes | Wim Hof (Netherlands)                   | 1 hr 6 min   |
| Beating on a drum              | Paskaran Srcekaram (Singapore)          | 27 hr 45 min |
| Kissing on television          | Rick Langley and Louisa Almedovar (USA) | 30 hr 59 min |
| Watching movies                | Chinnawatra Boomrasn, et al. (Thailand) | 50 hr 55 min |
| Lying on a bed of nails        | Inge Wilda Svinjen (Norway)             | 274 hours    |
| Sitting in a barrel            | Vernon Kruger (South Africa)            | 67 days      |
| Staying in a tree              | Bungkas (Indonesia)                     | 21 years     |

Source: Guinness Book of Records, 2004



1. What is the longest time spent sitting in a barrel?
2. Who holds the record for the longest time spent standing in a tub of ice cubes?
3. What is the record for longest time kissing on TV?
4. What is the record for the longest time spent watching movies?
5. Who holds the record for the longest time spent lying on a bed of nails?

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## 4 Pictograph: Better Skip the Dessert

In 2003, Sonya Thomas set a stomach-popping world record by eating 65 boiled eggs in 6 minutes and 40 seconds! To burn off that 5,000-calorie meal, Sonya probably needed to do a little exercise. Look at the pictograph to find out just how much exercise time that would take. Then answer the questions.



Exercise Time Needed to Burn 5,000 Calories

|                 |  |
|-----------------|--|
| Bicycling       |                             |
| In-line skating |                             |
| Jumping rope    |                             |
| Running         |                             |
| Swimming        |                             |
| Step aerobics   |               |

KEY:  = 1 hour of exercise

1. Which exercise burns calories the fastest? \_\_\_\_\_
2. Which exercise would Sonya have to do for the longest time to burn off 5,000 calories? \_\_\_\_\_
3. Which two exercises burn calories at the same rate? \_\_\_\_\_
4. To burn off 5,000 calories, how long would Sonya have to swim? \_\_\_\_\_
5. Which exercise takes about 13 hours to burn 5,000 calories? \_\_\_\_\_





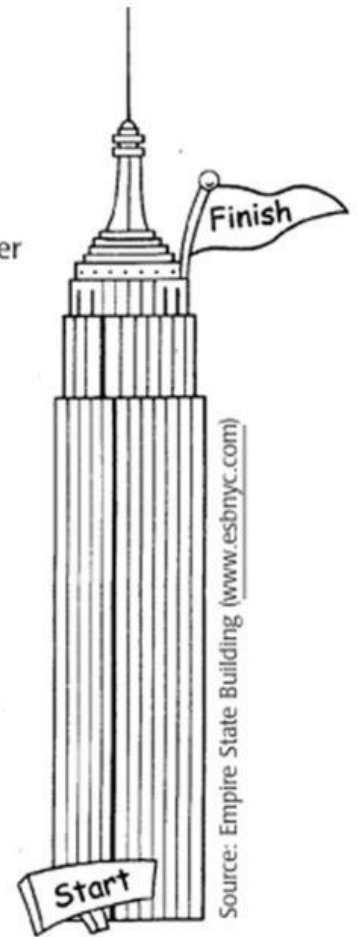
## 7 Line Plot: Who Needs the Elevator?

The Empire State Building Run-Up may just be the world's wackiest race. Each year, racers of all ages scramble up 1,576 steps to the Observatory deck on the 86th floor of the famous New York skyscraper. Look at the line plot to see how quickly the nimblest racers reach the top. Then answer the questions.

### 2004 Empire State Building Run-Up:

#### Finish Times of Top 25 Racers

(times rounded to the nearest half minute)



1. What was the winner's time for the race?
2. How many racers finished in 13 minutes or less?
3. What was the most common finish time among the top 25 racers?
4. How many racers finished in less than 12 minutes?
5. What general trend (or shape) do you see in these data?

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