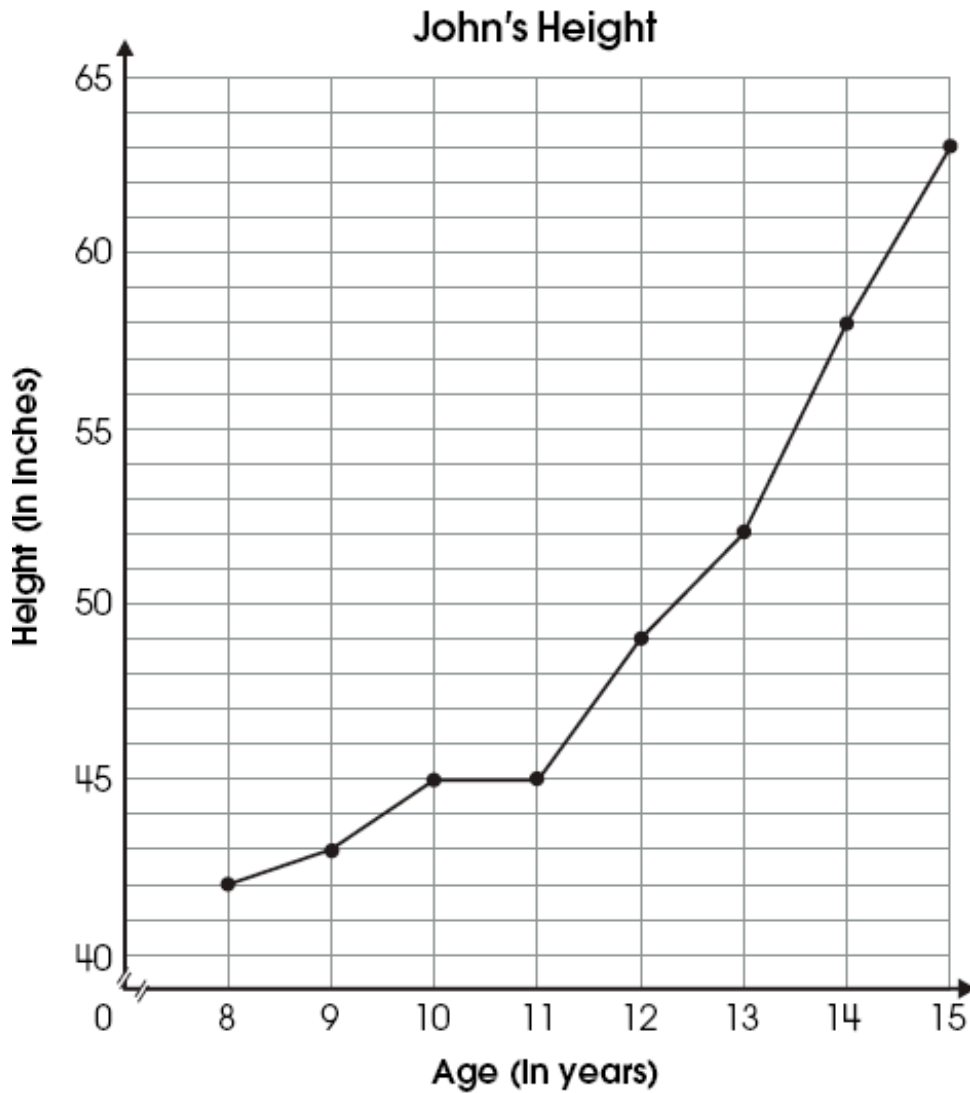


**Question 36**  
**Benchmark A**  
**March 2008**

36. John created the graph shown to represent his height over time.



Which statement is true about the graph?

- A. John grew the most between ages 12 and 13.
- B. John grew the most between ages 13 and 14.
- C. John grew the least between ages 14 and 15.
- D. John did not grow at all between ages 9 and 10.

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 29**  
**Benchmark A**  
**March 2006**

29. Mike surveys his class to find each student's favorite dessert and records his data as shown.

**Desserts**

<b>Student</b>	<b>Favorite Dessert</b>
Oscar	Ice Cream
Jasmine	Brownies
Ashley	Ice Cream
Marcus	Ice Cream
James	Brownies
Cody	Cookies
Jessica	Cookies
Courtney	Ice Cream
Kayla	Brownies
Taylor	Cup Cakes
Antonio	Ice Cream
Mike	Brownies

In your **Answer Document**, construct a frequency table to summarize the data. Be sure to include labels. (2 points)

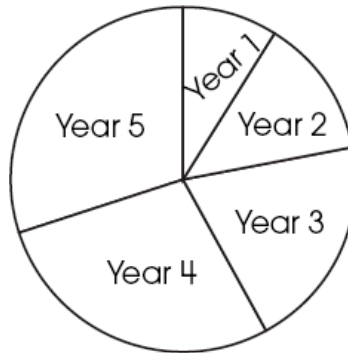
5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 33**  
**Benchmark A**  
**Spring 2007**

33. The height of a maple tree is recorded for each of 5 years in the table shown.

Year	1	2	3	4	5
Tree Height (in feet)	4	6	9	13	14

Chris displays the data in the circle graph shown.



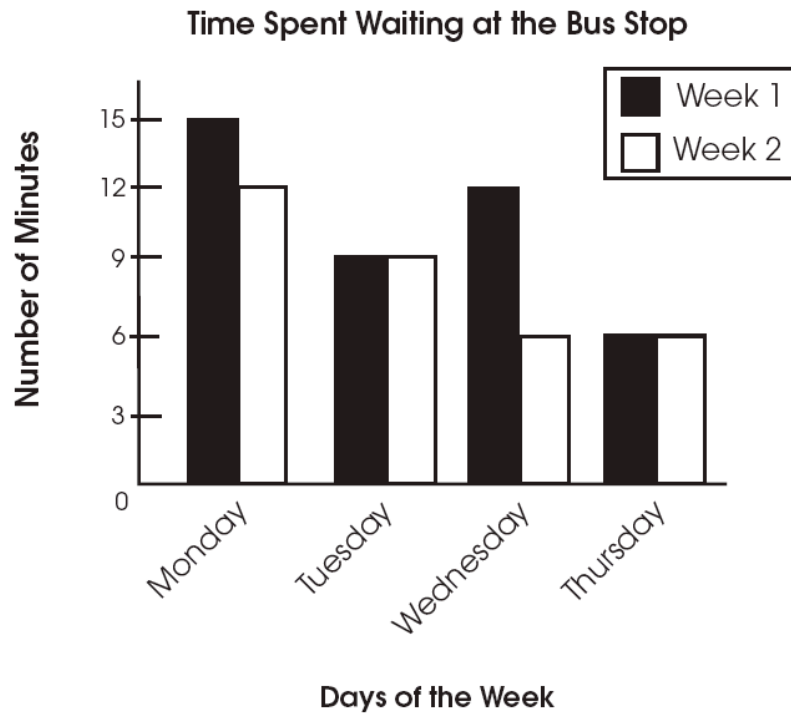
In your **Answer Document**, explain why Chris' circle graph is not an appropriate way to display the data.

Create an appropriate graph to display the data shown in the table. Be sure to give your graph a title, labels and a scale.

Explain why your graph is a better way to display the data. (4 points)

**Question 3**  
**Benchmark D**  
**Spring 2007**

3. Shelly recorded the amount of time she spent waiting at the bus stop on several days over two weeks.



How much more time did Shelly spend waiting at the bus stop during Week 1 than Week 2?

- A. Shelly waited the same amount of time in both weeks.
- B. Shelly waited 3 more minutes in Week 1.
- C. Shelly waited 6 more minutes in Week 1.
- D. Shelly waited 9 more minutes in Week 1.

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 32**  
**Benchmark E**  
**March 2006**

32. Mr. Reid wants to know which dessert the students in his class like best.

Which data would **not** be shown in a graph of desserts the students like?

- A. the price of the desserts
- B. the dessert students like best
- C. the number of students surveyed
- D. the dessert students like second best

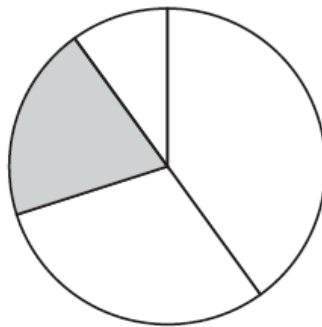
5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 12**  
**Benchmark E**  
**Spring 2007**

12. Jim created a table of the different types of music in his CD collection.

Music Types	Percentage of CDs
rock	40
oldies	30
country	20
classical	10

He started to create the circle graph shown to represent these data.



What type of music does the shaded section represent?

- A. rock
- B. oldies
- C. country
- D. classical

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
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**Question 3**  
**Benchmark F**  
**March 2006**

3. Ms. Benitez's class recorded the temperature for several mornings at 9:00 a.m. The temperatures the class recorded are shown.

61°, 63°, 62°, 65°, 66°, 61°, 60°

What is the mode of the data the class collected?

- A. 60°
- B. 61°
- C. 62°
- D. 65°

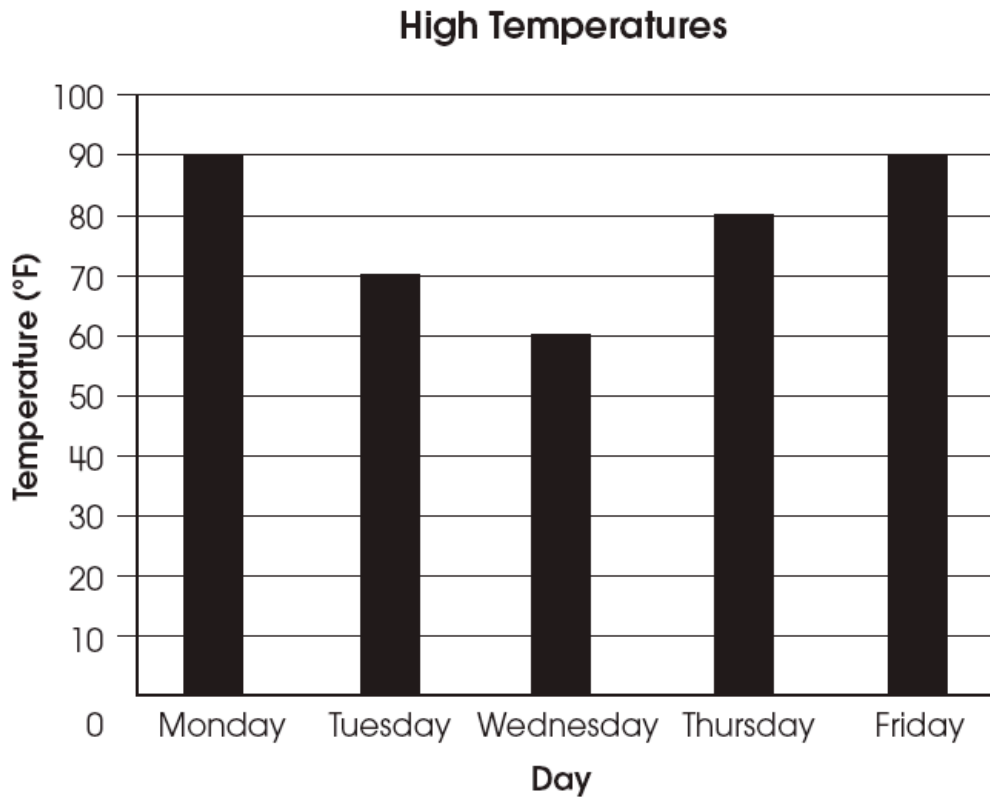
**Question 8**  
**Benchmark F**  
**March 2006**

Which group of numbers has the greatest median?

- A. 2, 5, 5, 5, 6
- B. 2, 3, 7, 9, 10
- C. 4, 4, 6, 6, 7
- D. 3, 5, 8, 9, 9

**Question 43**  
**Benchmark F**  
**March 2006**

43. This graph shows the high temperatures over five days in one week.



What is the range of the temperatures?

- A. 0 degrees
- B. 20 degrees
- C. 30 degrees
- D. 90 degrees

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 5**  
**Benchmark H**  
**March 2006**

5. Gregg has four shirts and three pairs of pants. His shirts are red, green, white, and yellow. His pants are navy, black and tan.

In your **Answer Document**, list all the different shirt and pants combinations that Gregg can wear. (2 points)

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 33**  
**Benchmark I**  
**Spring 2009**

33. Monica has 3 red cards, 5 green cards and 4 blue cards in a box. She wants to add some yellow cards to her box. She also wants the probability of randomly picking any one of the four colors to be the same.

In your **Answer Document**, determine the number of cards of each color Monica will need to add so that the probability of picking a red, green, blue, or yellow card is the same. Explain how you determined the number of each color.

Then, state the probability of picking one of the colors. (4 points)

**Question 32**  
**Benchmark I**  
**March 2008**

Margo has 3 blue marbles, 4 green marbles and 5 red marbles in a bag. She randomly selects 1 marble.

What is the probability that the marble is green or red?

- A.  $\frac{1}{12}$
- B.  $\frac{4}{12}$
- C.  $\frac{5}{12}$
- D.  $\frac{9}{12}$

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 22**  
**Benchmark I**  
**March 2006**

22. Beverly writes each letter of her name on a separate index card, as shown.

B	E	V	E	R	L	Y
---	---	---	---	---	---	---

She puts all the cards in a bag. She randomly pulls out one card.

What is the probability that the card is an "E"?

A.  $\frac{1}{2}$

B.  $\frac{2}{5}$

C.  $\frac{1}{7}$

D.  $\frac{2}{7}$

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 13**  
**Benchmark J**  
**Spring 2009**

Rachel flipped a coin 50 times and recorded the number of times it landed on tails. She recorded 28 tails.

Which statement describes the reasonableness of this result?

- A. It is reasonable because 28 is close to half of 50.
- B. It is reasonable because there will be more tails than heads.
- C. It is not reasonable because she will get 25 tails.
- D. It is not reasonable because she flipped the coin too many times.

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 46**  
**Benchmark J**  
**Spring 2009**

46. A board game uses the spinner shown.



During the game, Tyler will spin 40 times.

How many times can Tyler expect the spinner to land on "Lose a turn"?

- A. 1
- B. 5
- C. 8
- D. 20

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 41**  
**Benchmark J**  
**March 2008**

Craig tossed a coin 16 times. The coin landed on heads 6 times. - -

How does the number of heads Craig obtained compare with the number of heads expected?

- A. 1 fewer head than expected
- B. 2 fewer heads than expected
- C. 10 fewer heads than expected
- D. exact amount

**Question 17**  
**Benchmark J**  
**March 2006**

17. Janet has a box of 30 cards. There are 15 blue cards and 15 green cards in the box. Janet pulls out a card, records the color and returns the card to the box. After pulling 10 times, she has recorded 6 blue cards and 4 green cards.

Which statement describes whether this result is reasonable?

- A. It is reasonable because both 6 and 4 are close to 5.
- B. It is reasonable because 6 is more than 4.
- C. It is not reasonable because she will always get 5 blue cards and 5 green cards.
- D. It is not reasonable because she did not pick enough cards.

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
Data Analysis and Probability

**Question 6**  
**Benchmark K**  
**Spring 2007**

6. Samantha has different-colored buttons in a bag. The probabilities of picking each color are shown in the table.

Button Color	Probability
black	$\frac{6}{15}$
red	$\frac{2}{15}$
white	$\frac{4}{15}$
yellow	$\frac{3}{15}$

Samantha picks a button without looking in the bag.

Which color is she least likely to pick from the bag?

- A. black
- B. red
- C. white
- D. yellow

5<sup>th</sup> Grade Mathematics Ohio Achievement Test  
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