

# SAT Math

## Percentages 3

Question # ID

3.1 954943a4

Jennifer bought a box of Crunchy Grain cereal. The nutrition facts on the box state that a serving size of the cereal is  $\frac{3}{4}$  cup and provides 210 calories, 50 of which are calories from fat. In addition, each serving of the cereal provides 180 milligrams of potassium, which is 5% of the daily allowance for adults. If  $p$  percent of an adult's daily allowance of potassium is provided by  $x$  servings of Crunchy Grain cereal per day, which of the following expresses  $p$  in terms of  $x$ ?

- A.  $p = 0.5x$
- B.  $p = 5x$
- C.  $p = (0.05)^x$
- D.  $p = (1.05)^x$

3.2 65c49824

A school district is forming a committee to discuss plans for the construction of a new high school. Of those invited to join the committee, 15% are parents of students, 45% are teachers from the current high school, 25% are school and district administrators, and the remaining 6 individuals are students. How many more teachers were invited to join the committee than school and district administrators?

3.3 0ea56bb2

Year	Subscriptions sold
2012	5,600
2013	5,880

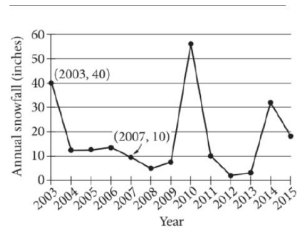
The manager of an online news service received the report above on the number of subscriptions sold by the service. The manager estimated that the percent increase from 2012 to 2013 would be double the percent increase from 2013 to 2014. How many subscriptions did the manager expect would be sold in 2014?

- A. 6,020
- B. 6,027
- C. 6,440
- D. 6,468

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Question # ID  
3.4 0231050d



The line graph shows the total amount of snow, in inches, recorded each year in Washington, DC, from 2003 to 2015. If  $p\%$  is the percent decrease in the annual snowfall from 2003 to 2007, what is the value of  $p$ ?

3.5 67c0200a

The number  $a$  is 70% less than the positive number  $b$ . The number  $c$  is 80% greater than  $a$ . The number  $c$  is how many times  $b$ ?

3.6 55818046

According to the 2010 Census, the adult population aged 18 years or greater of the United States in 2010 was 234,564,071. In 2010, a survey was conducted among a randomly chosen sample of adults aged 18 years or greater in the United States about their preference to live in a warm climate or a cool climate. The table below displays a summary of the survey results.

Climate Preferences

	Warm	Cool	No preference	Total
18–35 years old	295	168	45	508
36–50 years old	246	123	41	410
51–65 years old	238	117	48	403
Greater than 65 years old	137	78	64	279
Total	916	486	198	1,600

Which of the following is closest to the difference between the percentage of adults aged 18–50 years who responded “warm” and the percentage of adults aged 51 years or greater who responded “warm”?

- A. 4%
- B. 5%
- C. 10%
- D. 18%

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Question # ID

3.7 20845d36

The number  $a$  is 70% less than the positive number  $b$ . The number  $c$  is 60% greater than  $a$ . The number  $c$  is how many times  $b$ ?

3.8 8c5dbd3e

The number  $w$  is 110% greater than the number  $z$ . The number  $z$  is 55% less than 50. What is the value of  $w$ ?

3.9 8213b1b3

According to a set of standards, a certain type of substance can contain a maximum of 0.001% phosphorus by mass. If a sample of this substance has a mass of 140 grams, what is the maximum mass, in grams, of phosphorus the sample can contain to meet these standards?

3.10 34f8cd89

37% of the items in a box are green. Of those, 37% are also rectangular. Of the green rectangular items, 42% are also metal. Which of the following is closest to the percentage of the items in the box that are not rectangular green metal items?

- A. 1.16%
- B. 57.50%
- C. 94.25%
- D. 98.84%

3.11 25faa756

The number  $a$  is 60% greater than the positive number  $b$ . The number  $c$  is 45% less than  $a$ . The number  $c$  is how many times  $b$ ?

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3.12 ad911622

The value of a collectible comic book increased by 167% from the end of 2011 to the end of 2012 and then decreased by 16% from the end of 2012 to the end of 2013. What was the net percentage increase in the value of the collectible comic book from the end of 2011 to the end of 2013?

- A. 124.28%
- B. 140.28%
- C. 151.00%
- D. 209.72%

3.13 ba0e23b0

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140 is  $p\%$  greater than 10. What is the value of  $p$ ?

- A. 1,400
- B. 1,300
- C. 140
- D. 130

3.14 2afd3cec

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After 20% of the original number of marbles in a group were removed from the group, 360 marbles remained in the group. How many marbles were removed from the group?

- A. 72
- B. 90
- C. 450
- D. 1,800

3.15 1fbd3b67

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The number  $a$  is 190% greater than the number  $b$ . The number  $b$  is 80% less than 24. What is the value of  $a$ ?

- A. 9.12
- B. 13.92
- C. 26.40
- D. 36.48

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3.16 2e92cc21

The number  $a$  is 110% greater than the number  $b$ . The number  $b$  is 90% less than 47. What is the value of  $a$ ?

3.17 623dbebb

A reseller buys certain books for a purchase price of 5.00 dollars each and then marks them each for sale at a consumer price that is 270% of the purchase price. After 4 months, any remaining books not yet sold are marked at a discounted price that is 70% off the consumer price. What is the discounted price of each of the remaining books, in dollars?