

Question ID c9fad009

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: c9fad009

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 ?

Question ID 4e5308ae

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 4e5308ae

What number is 40% greater than 115?

Question ID 2894ecee

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 2894ecee

13 is $p\%$ of 25. What is the value of p ?

Question ID 9ac5d061

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 9ac5d061

The population of Greenville increased by 7% from **2015** to **2016**. If the **2016** population is k times the **2015** population, what is the value of k ?

- A. **0.07**
- B. **0.7**
- C. **1.07**
- D. **1.7**

Question ID a963160e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: a963160e

The positive number a is **230%** of the number b , and a is **60%** of the number c . If c is $p\%$ of b , which of the following is closest to the value of p ?

- A. **138**
- B. **217**
- C. **283**
- D. **383**

Question ID cba3004b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: cba3004b

The number of coins in a collection increased from **9** to **90**. What was the percent increase in the number of coins in this collection?

- A. 10%
- B. 81%
- C. 90%
- D. 900%

Question ID 2cc8781a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 2cc8781a

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%**

Question ID b7a6f094

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: b7a6f094

A scientist studying the life cycle of dragonflies counted the number of dragonflies in a certain habitat each day for **46** days. On February **15**, there were **99** dragonflies in the habitat. The percent increase in the number of dragonflies in the habitat from January **1** to February **15** was **12.50%**. How many dragonflies were in the habitat on January **1**?

- A. **88**
- B. **87**
- C. **12**
- D. **8**

Question ID f956e2a2

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: f956e2a2

A gift shop buys souvenirs at a wholesale price of **7.00** dollars each and resells them each at a retail price that is **290%** of the wholesale price. At the end of the season, any remaining souvenirs are marked at a discounted price that is **80%** off the retail price. What is the discounted price of each remaining souvenir, in dollars?

Question ID 90c6099e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 90c6099e

An insurance company offers a series of three information sessions. **1,250** people attended the first information session. **72%** of the people who attended the first information session attended the second information session, and **36%** of the people who attended the first and second information sessions attended the third information session. How many people attended all three information sessions?

Question ID 452a80e3

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 452a80e3

The result of increasing the quantity x by 1,800% is 684. What is the value of x ?

- A. 12,996
- B. 12,312
- C. 38
- D. 36

Question ID a0707653

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: a0707653

The result of increasing the quantity x by 400% is 60. What is the value of x ?

- A. 12
- B. 15
- C. 240
- D. 340

Question ID 86174ce1

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 86174ce1

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**

Question ID ede40c38

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: ede40c38

The number of zebras in a population in **2018** was **1.27** times the number of zebras in this population in **2014**. If the number of zebras in this population in **2014** is ***p***% of the number of zebras in this population in **2018**, what is the value of ***p***, to the nearest whole number?

Question ID 004f2999

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 004f2999

The amount of Hanna's bill for a food order was **\$50**. Hanna gave a tip of **20%** of the amount of the bill. What is the amount, in dollars, of the tip Hanna gave?

Question ID b544e3e7

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: b544e3e7

The table summarizes the number of objects in each group.

Group	Number of objects
A	375
B	54
C	690
D	81
Total	1,200

The number of objects in group C is $p\%$ of the number of objects in group A. What is the value of p ?

Question ID de335e2c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: de335e2c

Which expression represents the result of increasing a positive quantity w by **43%**?

- A. **1.43** w
- B. **0.57** w
- C. **43** w
- D. **0.43** w

Question ID e308945a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: e308945a

In a group, **40%** of the items are red. Of all the red items in the group, **30%** also have stripes. What percentage of the items in the group are red with stripes?

- A. **10%**
- B. **12%**
- C. **70%**
- D. **75%**

Question ID f7f7857d

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: f7f7857d

In **2008**, Zinah earned **14%** more than in **2007**, and in **2009** Zinah earned **4%** more than in **2008**. If Zinah earned ***y*** times as much in **2009** as in **2007**, what is the value of ***y***?

- A. **0.5600**
- B. **1.0056**
- C. **1.1800**
- D. **1.1856**

Question ID c8ca50d3

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: c8ca50d3

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?

Question ID e4a98693

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: e4a98693

432 is 96% of what number?

Question ID bfc9027d

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: bfc9027d

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

Question ID a307eb9f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: a307eb9f

The regular price of a shirt at a store is **\$11.70**. The sale price of the shirt is **80%** less than the regular price, and the sale price is **30%** greater than the store's cost for the shirt. What was the store's cost, in dollars, for the shirt? (Disregard the \$ sign when entering your answer. For example, if your answer is **\$4.97**, enter **4.97**)

Question ID 3310d2fb

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 3310d2fb

Last year, Cedric had **35** plants in his garden. This year, the number of plants in Cedric’s garden is **60%** greater than the number of plants in his garden last year. How many plants does Cedric have in his garden this year?

Question ID 1bddbd65

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 1bddbd65

210 is $p\%$ greater than 30. What is the value of p ?

Question ID 24e7f289

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 24e7f289

The expression $0.35x$ represents the result of decreasing a positive quantity x by what percent?

- A. 3.5%
- B. 35%
- C. 6.5%
- D. 65%

Question ID 5101d922

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 5101d922

There are ~~4~~**50** tiles in a box. Of these tiles, ~~6~~**%** are black. How many black tiles are in the box?

Question ID 08c0b207

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 08c0b207

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

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

Question ID 53b754ac

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 53b754ac

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 ?

Question ID 049d8d4e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 049d8d4e

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%**

Question ID 801aa14c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 801aa14c

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 ?

Question ID a2f38d36

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: a2f38d36

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

Question ID 2e0adfc9

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 2e0adfc9

The value of z is **1.13** times **100**. The value of z is what percent greater than **100**?

- A. **11.3**
- B. **13**
- C. **130**
- D. **213**

Question ID cc0f545f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: cc0f545f

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?

Question ID 227bc381

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 227bc381

In March, the price of a collectible card was \$15.50. In April, the price of the collectible card was \$17.36. The price of the collectible card in April was $p\%$ of the price of the collectible card in March. What is the value of p ?

- A. 12
- B. 88
- C. 112
- D. 188

Question ID dddca81d

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: dddca81d

The population of City A increased by **7%** from **2015** to **2016**. If the **2016** population is ***k*** times the **2015** population, what is the value of ***k***?

- A. **0.07**
- B. **0.7**
- C. **1.07**
- D. **1.7**

Question ID 2dd8d6f9

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 2dd8d6f9

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

Question ID 9bcaa533

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 9bcaa533

In a sample, 80% of the items are faulty. There are 88 faulty items in the sample. How many total items are in the sample?

Question ID 257d9f57

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Hard

ID: 257d9f57

The positive number a is **2,241%** of the sum of the positive numbers b and c , and b is **83%** of c . What percent of b is a ?

- A. **23.24%**
- B. **49.41%**
- C. **2,324%**
- D. **4,941%**