

1. Simplify:

$$\sqrt[3]{43x^5} \cdot \sqrt{49x^3}$$

$$7x\sqrt{7}$$

$$x\sqrt{7}$$

$$x\sqrt{7}$$

$$7x$$

$$7x$$

Which is greater, when $-1 < x < 0$?

2. Quantity A

$$|x|$$

Quantity B

$$x^2$$

The two quantities are equal

Quantity B is greater

Quantity A is greater

The relationship cannot be determined from the information given

3. Solve:

$$2315 + 932 =$$

$$282$$

14

283

263

Quantity A: 49012

Quantity B: 4056

4. Which of the following is true?

The two quantities are equal

Quantity B is larger.

Quantity A is larger.

The relationship of the two quantities cannot be determined based on the information provided.

5. Flour, eggs, sugar, and chocolate chips are mixed by weight in the ratio of 12 : 5 : 3 : 5, respectively. How many pounds of chocolate chips are there in 75 pounds of the mixture?

15

25

18

5

Quantitative Comparison

6. Quantity A: $|10| - |16|$
Quantity B: $|1 - 5| - |3 - 6|$

Quantity B is greater.

The two quantities are equal.

Quantity A is greater.

The relationship cannot be determined from the information given.

$$0 < x < y < z < 10$$

x, y, and z are integers.

7. Quantity A: -7
Quantity B: $x + y - z$

Quantity B is greater.

The two quantities are equal.

Quantity A is greater.

The relationship cannot be determined from the information given.

Quantity A:

$$7 - 4 - (-3) - 8$$

Quantity B:

$$8 - (-8) - 1 + 2$$

8. Which of the following is true?

select

The relationship between the quantities cannot be determined.

select

Quantity B is larger.

select

Quantity A is larger.

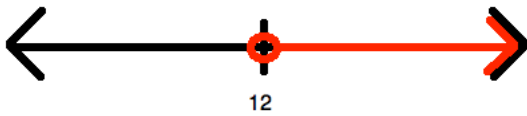
select

The two quantities are equal in size.

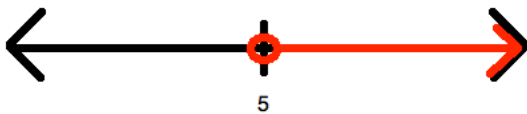
$$2x+6>16$$

9. Which of the following is a graph for the values of X defined by the inequality stated above?

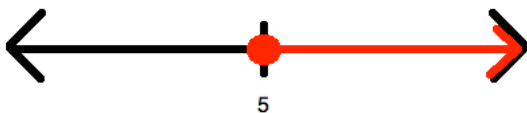
select



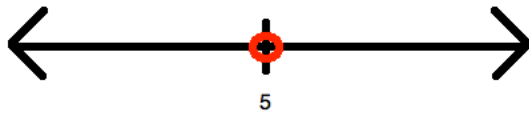
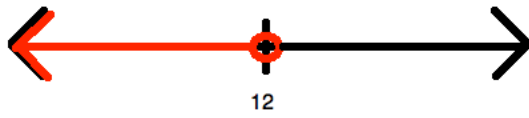
select



select



select



10. The product of two consecutive positive integers is 272. What is the larger of the two integers?

17

16

18

19

15

11. What is the sum of the 40th and the 70th elements of the series defined as:

$$s_n = s_{n-1} - 5$$

$$s_1 = 281$$

55

17

22

100

45

	Books sold in 2000 (thousands)	Books sold in 2005 (thousands)	Books sold in 2010 (thousands)
Store A	6	8	11
Store B	8	12	13
Store C	9	10	12

12. By what percentage did the total book sales of the three stores increase from 2005 to 2010?

12%

20%

33.3%

15%

25%

Quantity A:

x , where x is 65% of 408

Quantity B:

y , where y is 40% of 663

13. Which of the following is true?

The two quantities are equal.

Quantity A is greater.

Quantity B is greater.

A comparison cannot be determined from the given information.

14. A chamber of commerce board has seven total members, drawn from a pool of twenty candidates. There are two stages in the board's election process. First, a president, secretary, and treasurer are chosen. After that, four members are chosen to be "at large" without any specific title or district. How many possible boards could be chosen?

10,465,200

390,700,800

2,713,200

16,279,200

5,426,400

15. Box A has 10 green balls and 8 black balls.
Box B has 9 green balls and 5 black balls.
What is the probability if one ball is drawn from each box that both balls are green?

$\frac{5}{14}$

$\frac{10}{49}$

$\frac{5}{9}$

$\frac{9}{14}$

$\frac{19}{252}$