1.

$0 < x < y < 1$

Quantity A	Quantity B
yx	$(x - Y)^2$

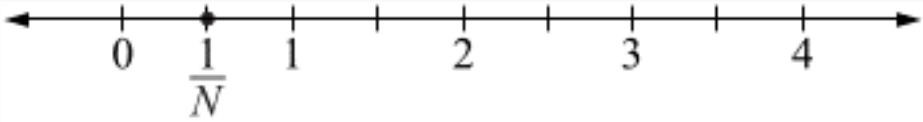
A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

2.



Quantity A:N

Quantity B: $\frac{1}{2}$

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

3.

Last Monday, James paid $8.00 per share for 180 shares of Stock X, paid $10.00 per share for 160 shares of Stock Y, paid $12.00 per share for 200 shares of Stock Z, and bought no other shares of stock.

Quantity A:The average (arithmetic mean) price per share that James paid for all of the shares of stock he bought last Monday

Quantity B:$10.00

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

4.

$2x+cy=10$

$6x+2cy=40$

The system of equations shown has a solution, where c is a constant.Quantity A:c

Quantity B:1

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

5.

The average (arithmetic mean) of the 6 numbers q, r, s, t, u, and v is 36.

Quantity A: $\frac{q}{6} + \frac{r}{6} + \frac{s}{6} + \frac{t}{6} + \frac{u}{6} + \frac{v}{6}$

Quantity B: 6

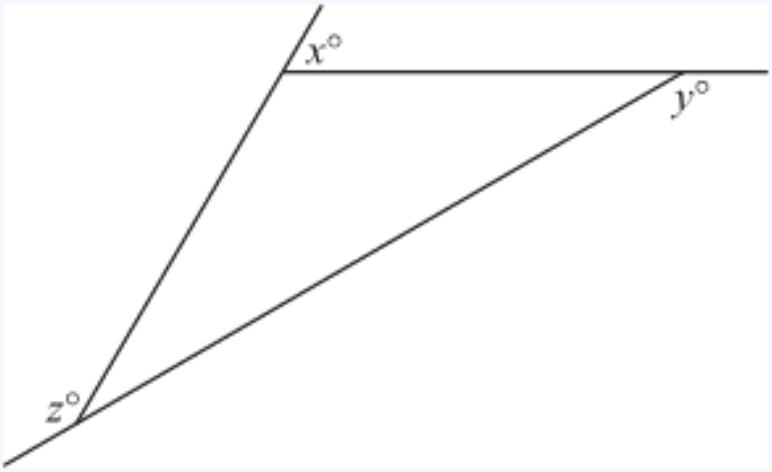
A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

6.



Quantity A: x+y+z

Quantity B: 360

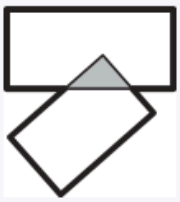
A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

7.



In the figure shown, two rectangular regions overlap to form a triangular region, which is shaded. The perimeters of the rectangles are 15 and 21, and the perimeter of the triangle is 6.

Quantity A:The sum of the lengths of the thick line segments

Quantity B: 30

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

8.

x and y are integers.

$2^x - 3y = 20$

Quantity A:y

Quantity B:0

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

9.

If x is 50 percent of y and if z is 30 percent of y, where y>0, then z is what percent of x ?_____%

10.

A total of $36,000 was invested for one month in a new money market account that paid simple annual interest at the rate of r percent. If the investment earned $360 in interest for the month, what is the value of r?

A 10.0

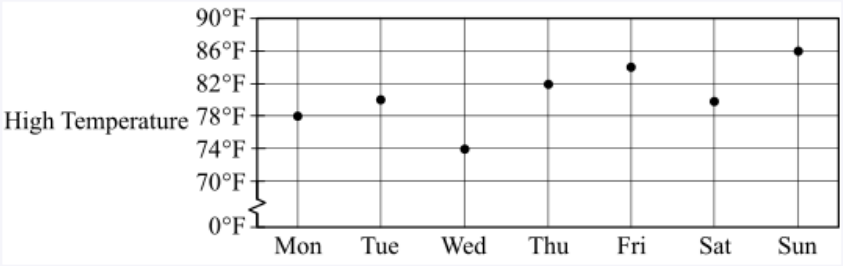
B 10.5

C 11.0

D 12.0

E 12.5

11.



The equation $C = \frac{5}{9}(F - 32)$ represents the relationship between temperature C in degrees Celsius and the corresponding temperature F in degrees Fahrenheit. The graph shows the high temperature, in degrees Fahrenheit, on each day of a certain week. Which of the following is closest to the range of the high temperatures for the week, in degrees Celsius?

A 4°C

B 7°C

C 8°C

D 12°C

E 14°C

12.

The circular bases of a right circular cylinder are inscribed in two opposite faces of a cube. If the volume of the cube is 64, which of the following is closest to the volume of the cylinder?

A 46

B 50

C 54

D 58

E 62

13.

Score Interval	Number of Students
90– 100	5
80– 89	8
70– 79	10
60– 69	2

All of the students in an English class took a test, and each student received a test score that was a whole number between 60 and 100, inclusive. The table shows the number of students who received a test score in each of four score intervals. Which of the following numbers could be the median test score for all of the students?

Indicate all such numbers.

A 85

B 80

C 75

D 70

E 65

F 60

14.

Book-Publishing Industry Sales in Region R

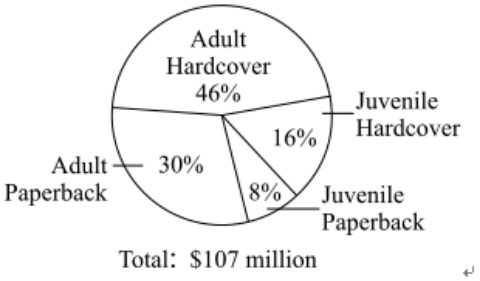
Summary of Book Sales for 2005, 2010, and 2015

(in millions of dollars)

Market Category	2005	2010	2015
Mass-market	$54	$93	$107
Professional	$41	$87	$105
Other	$146	$157	$198
Total	$241	$337	$410

Sales of Mass-Market Books

by Age Level and Cover Type, 2015



Total: $107 million

Question Question Question

For mass-market books in 2015, which of the following is closest to the ratio of the dollar amount of sales of adult hardcover books to the dollar amount of sales of juvenile hardcover books?

A 7 to 2

B 5 to 2

C 4 to 1

D 3 to 1

E 2 to 1

15.

For 2005, if sales of law books accounted for 39 percent of the dollar amount of sales of professional books, then sales of law books accounted for what percent of the dollar amount of all book sales for 2005?

Give your answer to the nearest whole percent .

_____%

16.

If the sales of mass-market adult hardcover books accounted for 33 percent of mass-market book sales in 2010, by approximately what percent did the dollar amount of sales of this type of book increase from 2010 to 2015?

A 20%

B 30%

C 40%

D 50%

E 60%

17.

Online News Source	Percent of Those Surveyed
Computer home page headlines	52%
Newspaper website	48%
News service website	35%
Magazine website	24%
Other	20%

In a study of online news sources, computer users were surveyed to determine what computer sources they used for online news. The responses of those surveyed are summarized in the table shown. If 15 percent of those surveyed responded that they used both newspaper and magazine websites , what percent of those surveyed used newspaper websites but not magazine websites?

____%

18.

The circumference of circle X is 24π. If the radius of circle Y is equal to $\frac{1}{12}$ of the circumference of circle X, what is the circumference of circle Y?

A π

B 2π

C $2\pi^2$

D $4\pi^2$

E $2\pi^3$

19.

If $t \neq 0$, which of the following is equivalent to $\dfrac{1}{1+\dfrac{1}{t+\frac{1}{t}}}$?

A $\dfrac{1}{t}$

B $\dfrac{t}{t^2+1}$

C $\dfrac{t^2+1}{t}$

D $\dfrac{t}{t^2+t+1}$

E $\dfrac{t^2+1}{t^2+t+1}$

20.

$6 \leq |x| \leq 8$

$1 \leq |y| \leq 2$

$3 \leq |z| \leq 4$

If x, y, and z satisfy the inequalities shown, what is the least possible value of $|x+y+z|$?

A 0

B 1

C 2

D 3

E 4

Answer Key: DAADACCD(60)DBB(AB)D(7)E(33)DEA