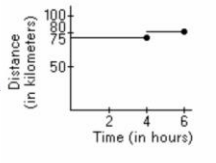
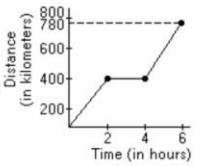
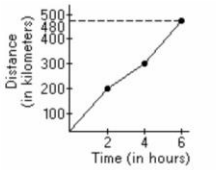
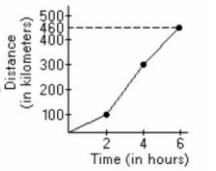
行程/路程问题：

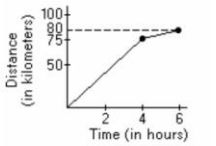
1. A car travels at an average speed of 80 kilometers per hour during a 6-hour trip and averages 75 kilometers per hour for the first 4 hours of the trip. Which of the following distance-versus-time graphs is consistent with this information?

A 

B 

C 

D 

E 

If 3 cars have traveled a total of 180,000 miles and the distance traveled by each car differs by at least 1 mile from the distance traveled by either of the other 2 cars,what is the minimum possible number of miles traveled by the car with the most mileage?

- A 60,001
- B 60,002
- C 61,000
- D 91,000
- E 180,000

Aperson walking 3 miles per hour goes from point A to point B in 10 minutes. How many miles is it from point A to point B?

- 1/10
- 3/10
- 1/3
- 1/2
- 2/3

Glenn travels 3 miles east, 4 miles north, 6 miles east, and 8 miles north. How many miles in a direct line is he from his starting point?

_____miles

If 3 cars have traveled a total of 180,000 miles and the distance traveled by each car differs by at least 1 mile from the distance traveled by either of the other 2 cars,what is the minimum possible number of miles traveled by the car with the most mileage?

- A 60,001
- B 60,002
- C 61,000
- D 91,000
- E 180,000

A-town and B-ville are connected by a straight, 420-mile road. At noon, Atu left A-town for B-ville, and Brek left B-ville for A-town. If Atu travels at 56 miles per hour and Brek travels at 49 miles per hour, how many miles apart will Atu and Brek be 1 hour before they meet?_____

While driving from A-ville to B-town, Harriet drove at a constant speed of 115 kilometers per hour. Upon arriving in B-town, Harriet immediately turned and drove back to A-ville at a constant speed of 135 kilometers per hour. If the entire trip took 5 hours, how many minutes did it take Harriet to drive from A-ville to B-town?

- 138
- 148
- 150
- 162
- 168

The speed of light is approximately $3 \cdot 10^5$ kilometers per second.

Quantity A	Quantity B
Approximate number of kilometers that light can travel in 1 hour.	1.08×10^8

- Quantity A is greater.
- Quantity B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

Angelo ran 6 miles per hour for 3 miles and 8 miles per hour for 2 miles. What was his average speed, in miles per hour?

- 19/3
- 20/3
- 34/4
- 22/3
- 23/3

Andy drove from Townville to Villageton at an average speed of 40 miles per hour. He then drove from Villageton to Townville at an average speed of 60 miles per hour.

Quantity A	Quantity B
50	The average speed of Andy's entire trip in miles per hour.

- Quantity A is greater.
- Quantity B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

For the first 5 hours of a trip, a plane averaged 120 kilometers per hour. For the remainder of the trip, the plane travelled an average speed of 180 kilometers per hour. If the average speed for the entire trip was 170 kilometers per hour, how many hours long was the entire trip?

- 15
- 20
- 25
- 30
- 35

David drove to work at an average (arithmetic mean) speed of 45 miles per hour. After work, David drove home at an average speed of 60 miles per hour. If David spent a total of 2 hours commuting to and from work, how many miles does David drive to work?

- 48
- 256/5
- 360/7
- 105/2
- 160/3

Jasmine drives the first 150 miles of her trip at an average speed of 50 miles per hour. If she drives the remaining 80 miles of her trip at an average of 40 miles per hour, what is her average speed, in miles per hour, for the entire trip?

- 44
- 45
- 46
- 47
- 48

Noelle walks from point A to point B at an average speed of 5 kilometers per hour. At what speed, in kilometers per hour, must Noelle walk from point B to point A so that her average speed for the entire trip is 6 kilometers per hour?

- 6.75
- 7
- 7.25
- 7.5
- 7.75

A manager is forming a 6-person team to work on a certain project. From the 11 candidates available for the team, the manager has already chosen 3 to be on the team. In selecting the other 3 team members, how many different combinations of 3 of the remaining candidates does the manager have to choose from?

- A 6
- B 24
- C 56
- D 120
- E 462

Clyde drove 30 miles in 20 minutes, and then drove an additional 10 miles in 10 minutes.

Quantity A	Quantity B
Clyde`s average speed for the entire trip.	75 miles per hour

- Quantity A is greater.
- Quantity B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

进水/出水问题/容器/体积类问题

Three pumps, P, R, and T, working simultaneously at their respective constant rates, can fill a tank in 5 hours. Pumps P and R, working simultaneously at their respective constant rates, can fill the tank in 7 hours. How many hours will it take pump T, working alone at its constant rate, to fill the tank?

- A 1.7
- B 10
- C 15
- D 17.5
- E 30

At the beginning of a trip, the tank of Diana`s car was filled with gasoline to half of its capacity. During the trip, Diana used 30 percent of the gasoline in the tank. At the end of the trip, Diana added 8 gallons of gasoline to the tank. The capacity of the tank of Diana`s car was x gallons. Which of the following expressions represent the number of gallons of gasoline in the tank after Diana added gasoline to the tank at the end of the trip?

Indicate all such expressions.

- A $x/2-3\cdot x/20+8$
- B $7\cdot x/20+8$
- C $3\cdot x/20+8$
- D $x/2+3\cdot x/20-8$
- E $7\cdot x/20-8$

During an experiment, the pressure of a fixed mass of gas increased from 40 pounds per square inch (psi) to 50 psi. Throughout the experiment, the pressure, P psi, and the volume, V cubic inches, of the gas varied in such a way that the value of the product PV was constant.

Quantity A	Quantity B
the volume of the gas when the pressure was 40 psi	1.2times the volume of the gas when the pressure was 50 psi

- 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.

Working together, 7 identical pumps can empty a pool in 6 hours. How many hours will it take 4 pumps to empty the same pool?

- $4\frac{2}{3}$
- $9\frac{1}{4}$
- $9\frac{1}{3}$
- $9\frac{3}{4}$
- $10\frac{1}{2}$

Working alone, pump A can empty a pool in 3 hours. Working alone, pump B can empty the same pool in 2 hours. Working together, how many minutes will it take pump A and pump B to empty the pool?

- 72
- 75
- 84
- 96
- 108

Pump A can empty a pool in A minutes, and pump B can empty the same pool in B minutes. Pump A begins emptying the pool for 1 minute before pump B joins. Beginning from the time pump A starts, how many minutes will it take to empty the pool?

- (A+B−1)/2
- A*(B+1)/(A+B)
- A*B/(A+B)
- A*B/(A+B)−1
- A*(B−1)/(A+B)

A container holds 4 quarts of alcohol and 4 quarts of water. How many quarts of water must be added to the container to create a mixture that is 3 parts alcohol to 5 parts water by volume?

- 4/3
- 5/3
- 7/3
- 8/3
- 10/3

浓度问题

Solution X is 10 percent alcohol by volume, and solution Y is 30 percent alcohol by volume. How many milliliters of solution Y must be added to 200 milliliters of solution X to create a solution that is 25 percent alcohol by volume?

- 250/3
- 500/3
- 400
- 480
- 600

Solution Y is 40 percent sugar by volume, and solution X is 20 percent sugar by volume. How many gallons of solution X must be added to 150 gallons of solution Y to create a solution that is 25 percent sugar by volume?

- 37.5
- 75
- 150
- 240
- 450

利润/打折等问题

工程问题

A deck can be built by 5 workers in 6 hours. Working at the same rate, how many hours would it take 8 workers to build the same deck?

- 5/4
- 15/4
- 19/4
- 21/4
- 23/4

Commented [YP1]: 工程类问题通常都是设工作效率（每个人平均每小时干多少量）