

Monday, October 10

In the complex numbers where $i^2 = -1$, $\frac{i-1}{i} = ?$

a. -1

b. $-1 - i$

c. $1 - i$

d. $1 + i$ 

e. $-1 + i$

Tuesday, October 11

In the figure below, $ABCD$ and $PQRS$ are both squares. What is the area of $PQRS$?

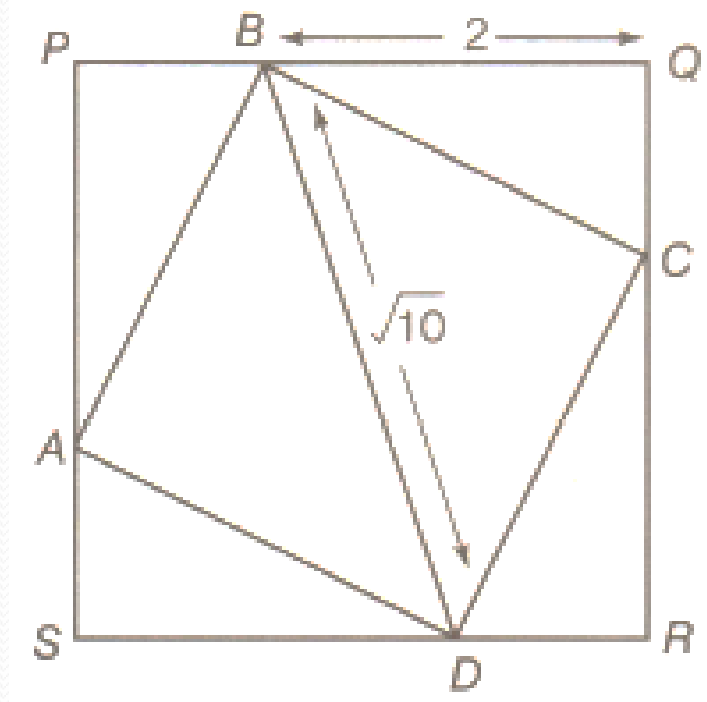
f. 36

g. 25

h. 16

j. 9

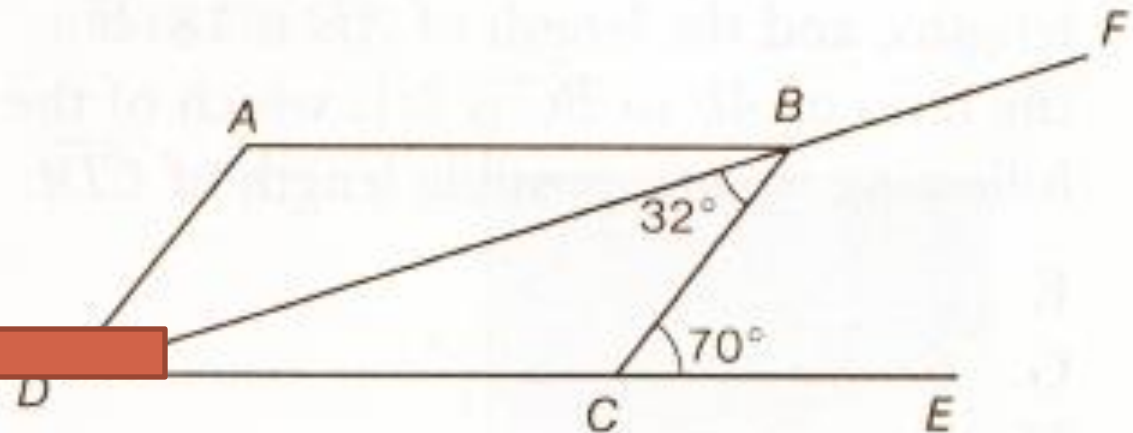
k. 5



Wednesday, October 12

In a parallelogram $ABCD$ shown below, \overline{DB} is a diagonal and F is on \overleftrightarrow{DB} . Point E is on line \overleftrightarrow{DC} . If $\angle BCE$ measures 70° and $\angle DBC$ measures 32° , find the measure of $\angle FBA$.

- a. 38°
- b. 70°
- c. 110°
- d. 142°
- e. 148°




Thursday, October 13

If $x - 3y$ is 60% of $9y$, what is the value of $\frac{x}{y}$?

f. 60

g. 18

h. $\frac{42}{5}$ 

j. $\frac{18}{5}$

k. $\frac{3}{5}$

Friday, October 14

The number of cars parked in the lot of a large office complex on a typical weekday is a function of the time of day. In the graph below, a given x -value is the number of hours after 7 a.m.

The equation of the function is given by $y = -100(x - 6)^2 + 5000$. According to this function, how many cars could one expect to find in the lot at 4 p.m. on a typical weekday?

- a. 3,400
- b. 4,100
- c. 4,600
- d. 4,900
- e. 5,000

