1

Before a recount the percentage of the total number of votes that were for the challenger was $\frac{5.4}{5+5.4}*100=\frac{5.4}{10.4}*100$;
After the recount the percentage of the total number of votes that were for the challenger was $\frac{5.4}{5.2+5.4}*100=\frac{5.4}{10.6}*100$;

Since the total # of votes increased (denominator increased from 10.4 to 10.6) and the # of votes for the challenger remained the same then the percentage of the total number of votes that were for the challenger clearly decreased, though since the increase in the total # of votes were minimal then the decrease in the percentage of the total number of votes that were for the challenger would also be minimal. Only answer choice B fits.

Answer: B.

2

If someone's grade is in x_{th} percentile of the n grades, this means that $x\%$ of people out of n has the grades less than this person.

Being in 90th percentile out of 80 grades means Angela outscored $80*0.9=72$ classmates.

In another class she would outscored $100-19=81$ students (note: Angela herself is not in this class).

So, in combined classes she outscored $72+81=153$. As there are total of $80+100=180$ students, so Angela is in $\frac{153}{180}=0.85=85\%$, or in 85th percentile.

Answer: D.

3

Bobby bought 2 shares, and which he sold for $96 **each**. If he had a **profit of 20% on the sale** of one of the shares but a **loss of 20% on the sale** of the other share, then on the sale of both shares Bobby had...

A) a profit of 10
B) a profit of 8
C) a loss of 8
D) a loss of 10
E) neither a profit nor a loss

Cost of the first stock: 96/1.2=80, so profit from it 96-80=16
Cost of the second stock: 96/0.8=120, so loss from it 96-120=-24

Overall loss 16-24=-8

Answer: C.

4

Approach #1:
8 percent compounded semiannually --> 4% in 6 moths.

For the first 6 moths interest was 4% of $10,000, so $400;
For the next 6 moths interest was 4% of $10,000, plus 4% earned on previous interest of $400, so $400+$16=$416;

Total interest for 1 year was $400+$416=$816.

Answer: C.

Approach #2:
If the interest were compounded *annually* instead of *semiannually* then in a year the interest would be 8% of $10,000, so $800. Now, since the interest is compounded semiannually then there would be interest earned on interest (very small amount) thus the actual interest should be a little bit more than $800, only answer choice C fits.

Answer: C.