Mangalore PU College

Tip Of the Week

How do you find new average when you remove an element form the current average?

Ok, let's assume that I have a current rating average of 3.3.

Now, I want to remove a rating of 4 from the current average. How do I find the new average?

To find the 'new average', you should know the number of observations. So I all I have is that the current average is 3.3, without knowing how many observations I had to get there. How would I do it if I did know the number of observations in the first place?

Let the value that gets reduced be 'a'. If the current average is 3.3, based on 'n' observations, then the sum of the ratings will be 3.3n. We reduce this sum by 4 (as 'a'= 4) and divide it by 'n−1'(because the number of observations is also reduced by 1).

Therefore, the revised average is . In the problem above, the new average would be   . If the value of 'n' is 8, then the new average will be 3.2.
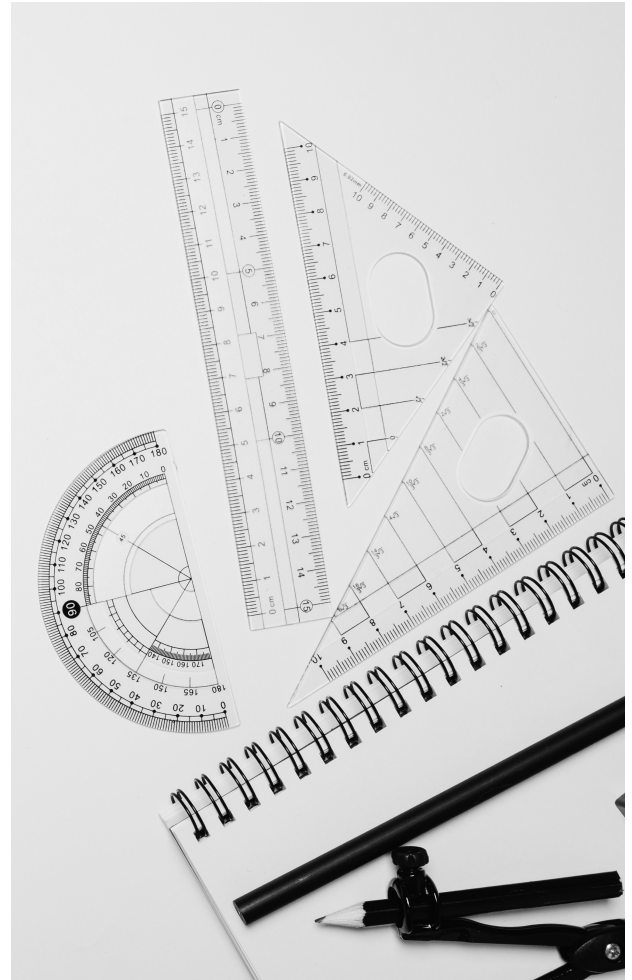
Quiz

1. For what value of 't' is x = , a solution of $7x + tx - 3 = 0$?
2. Solve for x: $\sqrt{3}x^2 - 2\sqrt{2}x - 2\sqrt{3} = 0$.
3. Find the missing number in the given series: 2, 7, 10, 22, 18, 37, 26, _____.
4. Look at this series: 53, 53, 40, 40, 27, 27, _____. What number should come next?
5. Two students appeared at an examination. One of them secured 9 marks more than the other and his marks was 56% of the sum of their marks. What are the marks obtained by them?
6. The minute hand of a clock overtakes the hour handat intervals of 66 minutes of the correct time. How much time does the clock gain or lose in 4 hours?

Follow the following four steps to solve radical equations.

1. Isolate the radical expression.
2. Square both sides of the equation: If X = Y then $X^2 = Y^2$
3. Once the radical is removed, solve for the unknown.
4. Check all answers.

DID YOU KNOW?

Example	
Problem	Solve. $1+\sqrt{2x+3} = 6$

$1+\sqrt{2x+3}-1 = 6-1$ Begin by subtracting 1 from both sides in order to isolate the radical
$\sqrt{2x+3} = 5$ term. Then square both sides to remove the binomial from the radical.
$\left(\sqrt{2x+3}\right)^2 = (5)^2$

$2x+3 = 25$ Simplify the equation and solve for x.
$2x = 22$
$x = 11$

$1+\sqrt{2(11)+3} = 6$ Check your answer. Substituting 11 for x in the original equation yields a
$1+\sqrt{22+3} = 6$ true statement, so the solution is
$1+\sqrt{25} = 6$ correct.
$1+5 = 6$
$6 = 6$

Answer $x = 11$ is the solution for $1+\sqrt{2x+3} = 6$.

ⓘ FACT

Secret of "BLUETOOTH"

Bluetooth technology is named after herald blatand, a 10th century Viking king whose last name translates to 'Bluetooth'. Whether or not he had a literal blue tooth is debated, but he was renowned for peacefully bringing people from different lands together. The symbol on bluetooth's logo is also Blatand's initials in ancient Runes.

🔍 DID YOU KNOW....

Focus

Consider a concave mirror as shown, with a light ray coming in a parallel to the optical axis. The centre of the spherical mirror with radius R is located at O. The optical axis strikes the mirror at A and the ray in question hits the reflector at B.(Fig 1.1)

From the Law of Reflection, and angle geometry of parallel lines, we know that the marked angles are equal. Hence we have an isosceles triangle BFO. We are interest in the location of point F; we want toknow where rays from infinity get focused. Dropping the median from F and using trigonometry, we can find the distance F and O, i.e.'b' (Fig 1.1)

For small angles, the cosine is close to 1, so for rays close to the optical axis, the focus will be very nearly R/2, or halfway from the reflecting surface to the centre of curvature. For most of our work with mirrors, we will be using this approximation for the location of the focus. The distance from the surface to the surface to the focus is called the focal length, which we shall denote with the letter 'f'. (Fig 1.1,1.2)
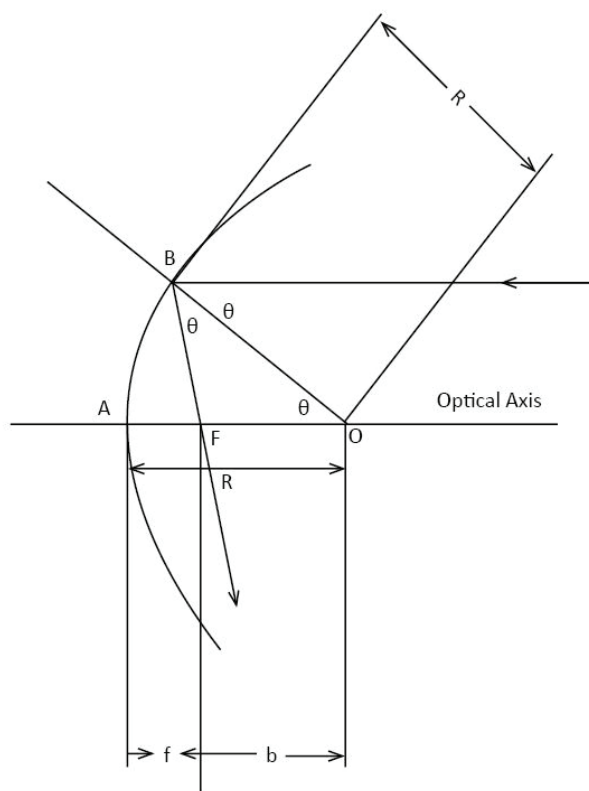

Fig 1.1

$$\frac{R}{2b} = \cos\theta = b = \frac{R}{2\cos\theta}$$

$$= f = R - \frac{R}{2\cos\theta}$$

NUT FACT

i FACT

Coconut juice or water inside- not only is sterile, but has the same electrolytic balance as human blood, which is enabled medics in the pacific theatre in the world war II to use it as an emergency substitute for plasma.

PRINCIPAL OF THE MONTH

As it is said "Knowledge is Power" bringing this in the students has become a big task for all the educational institutions in this present scenario.

According to me, getting knowledge is nothing but managing him /her self to lead life successfully by facing stepping challenges boldly without any hesitation and fear .

So facing challenges in the life with out taking back is an art, which can be achieved from knowledge. This challenge has been taken by us at S J R kengeri public school to build the individual for the future endeavour.

Vanmala A
-Principal

FACT

Tree Talks.

Did you know Trees 'talk' by exchanging chemicals. They communicate through underground fungi, and when they can recognize their relatives, they share nutrients. Basically, tree 'families' help each other out.

our social existence

Youtube   Facebook   Instagram