NEW STANDARD ACADEMY

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PHYSICS

1. When a person jumps out of a boat, the boat moves backward .Explain ,why?
2. When a person hits a heap of straw, His foot is not injured. Why?
3. Action and reaction are equal and opposite so they cancel each other. "Is it a correct statement?
4. If some force acts on a body, what will happen to acceleration of the body when its mass is (a) doubled, and (b) made $\frac{1}{4}$ th?
5. A cricket player lowers his hands while catching a fast moving ball explain, why?

CHEMISTRY

1. What is the effect of temperature on rate of diffusion and why?
2. Which fact show s that there is space between the particles of matter?
3. Why can we easily move our hand in air but not through a plank of wood?
4. What are the two ways to classify matter? How is matter classified on physical properties?
5. Why does a gas exert pressure?

BIOLOGY

1. What is the difference between primary and secondary wall of plant cell
2. Give the cementing material of plant cell
3. What is the function of vacuole
4. Give the difference between prokaryotic and eukaryotic cell
5. What is a endo membrane system

MATHS

1. If =0 and x = -01 are the zero of the polynomial $f(x) = 2x^3-3x^2+ax+b$, find the value of a and b.

2. If p and q are remainders when the polynomial $x^3+2x^2-5ax-7$ and $x^3+ax^2-12x+6$ are divided by (x+1) and (x-2) respectively and if 2p+q=6 find the value of a.

3. Find the values of p and q so that (x+1) and (x-1) are factors of the polynomial $x^4 + px^3 + 2x^2 - 3x + q$.

4. Factorise expressions by splitting the middle term: $7\sqrt{2}x^2 - 10x - 4\sqrt{2}$

5. In the figure PQRS is a rectangle with length 6 cm and breadth 3cm. O is the mid – point of PQ . Find the coordinates of P,Q,R and S.
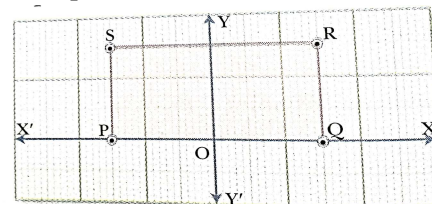
6. A point P(a,b) is such that : a < 0,b > 0. In which quadrant does the point P lie?

7. The image of a points P under reflection in the x-axis has the coordinates Q(7,-3). The coordinates of P are:

8. Represent 2-$\sqrt{2}$ on the number line.

9. Prove that : $\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \frac{1}{\sqrt{3}+\sqrt{4}} + \cdots + \frac{1}{\sqrt{8}+\sqrt{9}} = 2$

10. If x=2+$\sqrt{3}$, find the value of $x^3+\frac{1}{x^3}$.