

Mathematics

8th Grade

Correction - Standards

March - 2010

* 1st - Exercise:

1. Triangle ABC is a semi-equilateral. (having 90° & 30° angles)
then $CB = \frac{1}{2} \text{ hyp} = \frac{1}{2} AB$ (side facing 30° angle)

$$\text{So, } CB = \frac{4}{2} = 2 \text{ cm.}$$

And $AC = \frac{\sqrt{3}}{2} \text{ hyp} = \frac{\sqrt{3}}{2} AB$ (side facing 60° angle) (a)

$$\text{So, } AC = \frac{\sqrt{3}}{2} (4) = 2\sqrt{3} \text{ cm.}$$

$$\text{Thus, Area}_{ABC} = \frac{\text{Base} \times \text{height}}{2} = \frac{AC \times CB}{2} = \frac{2 \times 2\sqrt{3}}{2} = 2\sqrt{3} \text{ cm}^2$$

$$2. E = \frac{3^{13} - 3^{12}}{2} = 3^{12} \frac{(3-1)}{2} = 3^{12} \frac{(2)}{2} = 3^{12} \quad (c)$$

3. $\hat{RKS} + \hat{KSN} = 180^\circ$ (sum of adjacent angles in a parm)

$$\text{then } x + 2x = 180$$

$$3x = 180$$

$$\text{Thus } x = 60^\circ \quad (a)$$

$$4. 4^2 \times 2^{x+1} \times 2^3 = 8^5$$

$$\text{then, } 2^4 \times 2^{x+1} \times 2^3 = (2^3)^5$$

$$2^{x+8} = 2^{15}$$

$$\text{then } x+8 = 15 \quad (c)$$

$$\text{Thus, } x = 7$$

* 2nd - Exercise:

$$1) A = \frac{1}{5} - \left(\frac{2}{5}\right)^2 = \frac{1}{5} - \frac{4}{25} = \frac{5}{25} - \frac{4}{25} = \frac{1}{25}$$

then $A = 0.04 = 4 \times 10^{-2}$ (scientific notation).

P-1.