
SSC MTS 2023
लक्ष्य बैच
अति संभावित प्रश्न
BASED ON PREVIOUS YEAR PAPERS
MATHS
22 जुलाई
सुबह 9 बजे
15 दिन लगातार, इस बार MTS पार

MISSION SSC MTS-2023 (TARGET BATCH)

$-2 > -5$

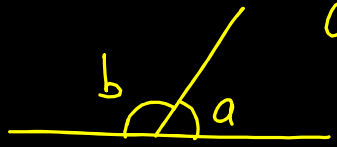
$2 < 5$

∠a and ∠b are the linear pair of angles. ∠a is greater than one sixth of the right angle; then

∠a और ∠b रैखिक युग्म कोण हैं। ∠a का मान एक समकोण के एक छटवें से बड़ा है; तो

a. $b > 165^0$ b. $b \leq 165^0$ c. $b < 165^0$

d. $b \geq 165^0$



$a + b = 180^\circ \Rightarrow a = 180^\circ - b$

$a > \frac{1}{6} \times 90^\circ$

$a > 15^\circ$

$\therefore 180^\circ - b > 15^\circ$

$\Rightarrow -b > -165^\circ$

$\Rightarrow b < 165^\circ$

अति संभावित प्रश्न – Based on Previous Year Paper

$\alpha + \beta = 90°$

$\alpha = 90° - 30°$

$= 60°$

An angle is 30^0 more than one half of its complement. Find the angle.

एक कोण अपने पूरक के आधे से 30^0 अधिक है। कोण ज्ञात कीजिए।

a. 25^0 b. 30^0 c. 50^0 d. 75^0

θ $(90-\theta)$

$$\theta = \frac{(90-\theta)}{2} + 30°$$

$$\Rightarrow 2\theta = 90 - \theta + 60°$$

$$\Rightarrow 3\theta = 150°$$

$$\theta = 50°$$ Ans

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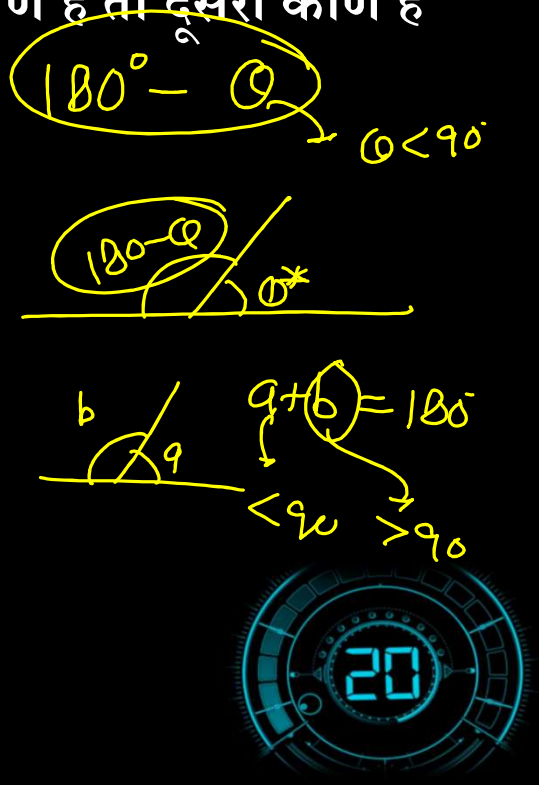
If one angle of a linear pairs is acute angle the another angle is
यदि एक रैखिक जोड़े का एक कोण न्यून कोण है तो दूसरा कोण है

(a) Acute angle/ न्यून कोण
(b) Right angle/ समकोण
(c) Obtuse angle/अधिक कोण
(d) None of these/इनमें से कोई नहीं



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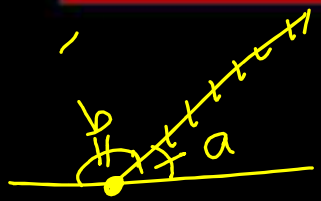
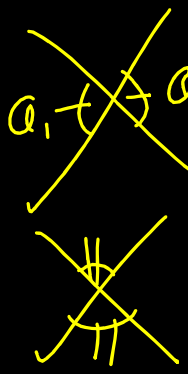
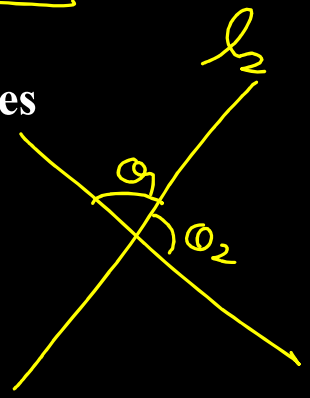


Answer on the basis of the following statements:

When two straight lines intersects, then:

1. Adjacent angles are complementary
2. Liner Pair of angles are a pair of adjacent angles
3. Vertically opposite angles are equal
4. Vertically opposite angles are supplementary





निम्नलिखित कथनों के आधार पर उत्तर दें:

जब दो ऋजु रेखाएं प्रतिच्छेदन करती हैं, तो:

1. आसन्न कोण पूरक होते हैं
2. रैखिक युग्म कोण आसन्न आसन्न युग्म कोण होते हैं
3. शीर्षाभिमुख कोण बराबर होते हैं
4. शीर्षाभिमुख कोण संपूरक होते हैं

1. 2 and 3 are correct.
2. 1 and 4 are correct
3. 1 and 3 are correct
4. 2 and 4 are correct

अति संभावित प्रश्न – Based on Previous Year Paper

MISSION SSC MTS-2023 (TARGET BATCH)

$(a+b+c)^2 = a^2+b^2+c^2+2(ab+bc+ca)$

If $\frac{p}{x}+\frac{q}{y}+\frac{r}{z}=1$ and $\frac{x}{p}+\frac{y}{q}+\frac{z}{r}=0$, find $\left(\frac{p}{x}\right)^2+\left(\frac{q}{y}\right)^2+\left(\frac{r}{z}\right)^2$.

यदि $\frac{p}{x}+\frac{q}{y}+\frac{r}{z}=1$ और $\frac{x}{p}+\frac{y}{q}+\frac{z}{r}=0$, तो $\left(\frac{p}{x}\right)^2+\left(\frac{q}{y}\right)^2+\left(\frac{r}{z}\right)^2$ ज्ञात कीजिये.

$= a^2+b^2+c^2$

a. 2 b. – 1 c. – 2 d. 1

$a+b+c=1$

$\frac{1}{a}+\frac{1}{b}+\frac{1}{c}=0$

Square both sides

$= \frac{bc+ca+ab}{abc}=0$

$(a+b+c)^2 = 1$

$=ab+bc+ca=0$

$\Rightarrow a^2+b^2+c^2+2(ab+bc+ca)=1$

$\Rightarrow a^2+b^2+c^2=1$ Ans

अति संभावित प्रश्न – Based on Previous Year Paper

MISSION SSC MTS-2023 (TARGET BATCH)

If $3x - \frac{2}{x} = 5$, find the value of $9x^2 - \frac{4}{x^2}$.

यदि $3x - \frac{2}{x} = 5$ तो $9x^2 - \frac{4}{x^2}$ का मान ज्ञात कीजिये.

a. $6\sqrt{29}$ b. $8\sqrt{3}$ c. 35 d. $5\sqrt{29}$

$\because a+b = \sqrt{(a-b)^2 + 4ab}$

$a = 3x \quad b = \frac{2}{x}$

$3x + \frac{2}{x} = \sqrt{\left(3x - \frac{2}{x}\right)^2 + 4 \times 3x \times \frac{2}{x}}$

$= \sqrt{5^2 + 24} = \sqrt{49}$

$= 7$

$(3x)^2 - \left(\frac{2}{x}\right)^2$

$= \left(3x + \frac{2}{x}\right)\left(3x - \frac{2}{x}\right)$

$= 7 \times 5$

$= 35$ (Ans)

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अति संभावित प्रश्न – Based on Previous Year Paper

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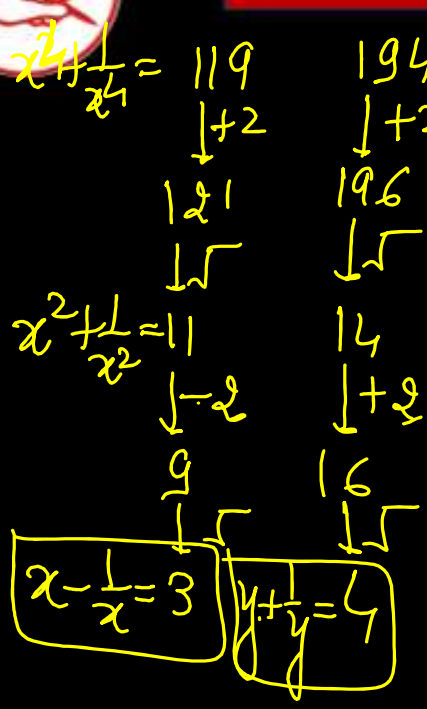
If $x^4 + \frac{1}{x^4} = 119$ and $y^4 + \frac{1}{y^4} = 194$, find the value of $\left(x - \frac{1}{x}\right) - \left(y + \frac{1}{y}\right)$.

यदि $x^4 + \frac{1}{x^4} = 119$ और $y^4 + \frac{1}{y^4} = 194$ तो $\left(x - \frac{1}{x}\right) - \left(y + \frac{1}{y}\right)$ का मान ज्ञात कीजिये.

a. 1 b. −1 c. 7 d. −7



अति संभावित प्रश्न – Based on Previous Year Paper

MISSION SSC MTS-2023 (TARGET BATCH)

If $x^2 + y^2 + z^2 + 2 = 2(y - x)$, then find $(x^3 + y^3 + z^3)$?

यदि $x^2 + y^2 + z^2 + 2 = 2(y - x)$; तो $(x^3 + y^3 + z^3)$ ज्ञात कीजिये?

a. -1 b. 3 c. 2 d. 0

$2y - 2x$

$-1 + 1 + 0$

$= 0$ (Ans)

$(x^2 + 1^2 + 2 \cdot x \cdot 1) + (y^2 + 1^2 - 2 \cdot y \cdot 1) + z^2 = 0$

$= (x+1)^2 + (y-1)^2 + z^2 = 0$

$\therefore x + 1 = 0 \Rightarrow x = -1$

$y - 1 = 0 \Rightarrow y = 1$

$z = 0$

अति संभावित प्रश्न – Based on Previous Year Paper

MISSION SSC MTS-2023 (TARGET BATCH)

If x is a real number and $x^3 + \frac{1}{x^3} = 0$ then find the value of $\left(x + \frac{1}{x}\right)^4$.

यदि x एक वास्तविक संख्या हो और $x^3 + \frac{1}{x^3} = 0$ तो $\left(x + \frac{1}{x}\right)^4$ का मान ज्ञात कीजिये.

a. 3 b. 6 c. 9 d. 0

$(a+b)^3 = a^3+b^3+3ab(a+b)$

$a = x$

$b = \frac{1}{x}$

$\left(x+\frac{1}{x}\right)^3 = x^3 + \frac{1}{x^3} + 3 \times x \times \frac{1}{x}\left(x+\frac{1}{x}\right)$

$\left(x+\frac{1}{x}\right)^3 = 0 + 3\left(x+\frac{1}{x}\right)$

$A^3 = 3A$

$\frac{A^3}{A} = \frac{3A}{A}$

$A^2 = 3$

$\left(x+\frac{1}{x}\right)^2 = 3 \Rightarrow \left(x+\frac{1}{x}\right)^4 = 9$ (Ans)

अति संभावित प्रश्न – Based on Previous Year Paper

MISSION SSC MTS-2023 (TARGET BATCH)

If $x + \frac{4}{x} = 10$, find the value of $\frac{x^3}{8} + \frac{8}{x^3}$?

यदि $x + \frac{4}{x} = 10$, तो $\frac{x^3}{8} + \frac{8}{x^3}$ का मान ज्ञात कीजिये?

a. 110 b. 113 c. 115 d. 120

$\frac{x}{2} + \frac{2}{x} = 5$

$\because \frac{x}{2} \times \frac{2}{x} = 1$

$\therefore \left(\frac{x}{2}\right)^3 + \left(\frac{2}{x}\right)^3 = 5^3 - 3 \times 5$

$= \frac{x^3}{8} + \frac{8}{x^3} = 125 - 15$

$= 110$ (Ans)

$a + \frac{1}{a} = x$

$a^3 + \frac{1}{a^3} = x^3 - 3x$

Condition

$a \times \frac{1}{a} = 1$

अति संभावित प्रश्न – Based on Previous Year Paper

MISSION SSC MTS-2023 (TARGET BATCH)

If $\frac{x^{24}+1}{x^{12}} = 7$, find the value of $\frac{x^{72}+1}{x^{36}}$? $x^{36} + \frac{1}{x^{36}}$

यदि $\frac{x^{24}+1}{x^{12}} = 7$, तो $\frac{x^{72}+1}{x^{36}}$ का मान ज्ञात कीजिये?

a. 322 b. 336 c. 343 d. 350

$$\frac{x^{24}}{x^{12}} + \frac{1}{x^{12}} = 7$$

$$x^{12} + \frac{1}{x^{12}} = 7$$

$$x^{36} + \frac{1}{x^{36}} = 7^3 - 3 \times 7$$

$$= 343 - 21$$

$$= 322 \text{ (Ans)}$$

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अति संभावित प्रश्न – Based on Previous Year Paper

MISSION SSC MTS-2023 (TARGET BATCH)

If $11\sqrt{n} = \sqrt{112} + \sqrt{343}$, the value of n is:

यदि $11\sqrt{n} = \sqrt{112} + \sqrt{343}$, तो n का मान है:

a. 3 b. 11 c. 13 d. 7

$11\sqrt{n} = 4\sqrt{7} + 7\sqrt{7}$

$11\sqrt{n} = 11\sqrt{7}$

$\therefore n = 7$ Ans

अति संभावित प्रश्न – Based on Previous Year Paper

MISSION SSC MTS-2023 (TARGET BATCH)

If $\frac{\sqrt{3+x}+\sqrt{3-x}}{\sqrt{3+x}-\sqrt{3-x}} = 2$, x =

यदि $\frac{\sqrt{3+x}+\sqrt{3-x}}{\sqrt{3+x}-\sqrt{3-x}} = \frac{2}{1}$, x =

a. 5/12 b. 12/5 c. 5/7 d. 7/5

$\frac{2\sqrt{3+x}}{2\sqrt{3-x}} = \frac{3}{1}$

$\Rightarrow \frac{3+x}{3-x} = \frac{9}{1}$

$\frac{6}{2x} = \frac{10}{8}$

$5x = 12$

$x = 12/5$ (Ans)

If $\frac{a}{b} = \frac{x}{y}$

$\frac{a+b}{a-b} = \frac{x+y}{x-y}$

अति संभावित प्रश्न – Based on Previous Year Paper

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$$\sqrt{10+\sqrt{25+\sqrt{108+\sqrt{154+\sqrt{225}}}}}=$$

a. 8 b. 4 c. 1/2 d. 2

Home-Work

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Thank You
धन्यवाद