

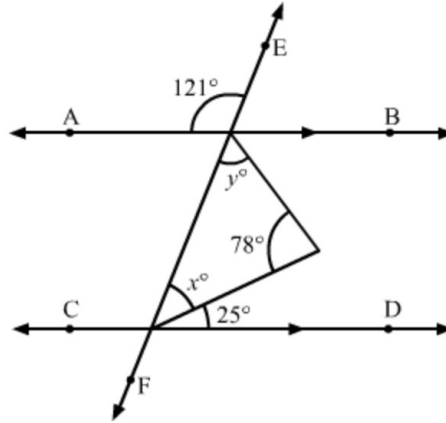
1. $\frac{p}{q}$ form of $1.\overline{385}$ is equal to
 (a) $\frac{1732}{990}$ (b) $\frac{1384}{999}$ (c) $\frac{1327}{990}$ (d) $\frac{668}{495}$
2. Which of the statement is true
 (a) $\sqrt[4]{9} < \sqrt[6]{26} < \sqrt[3]{5}$ (b) $\sqrt[4]{9} > \sqrt[6]{26} > \sqrt[3]{5}$ (c) $\sqrt[6]{26} > \sqrt[3]{5} > \sqrt[4]{9}$ (d) $\sqrt[6]{26} < \sqrt[3]{5} < \sqrt[4]{9}$
3. If $x = 3 + 2\sqrt{2}$, then $(\sqrt{x} - \frac{1}{\sqrt{x}})$ simplifies to
 (a) natural number which is prime (b) natural number which is composite
 (c) an irrational number (d) a rational number which is not an integer
4. A pole stands vertically at one of the corner of a triangular part ABC. For any corner the angle of Elevation of top of the pole from rest two comers of the part is same, then the shape of the part must be
 (a) Equilateral triangle (b) Isosceles triangle (c) Right angle triangle (d) Obtuse triangle
5. If $\frac{100\sqrt{25}}{\sqrt{25+x}} = 50$ then the value of x is:
 (a) 25 (b) $\frac{1}{\sqrt{25}}$ (c) $\sqrt{25}$ (d) $\frac{1}{25}$
6. If $a^x = b^y = c^z$ and $\frac{b}{a} = \frac{c}{b}$ then $\frac{2z}{x+z}$ is equal to:
 (a) $\frac{y}{x}$ (b) $\frac{x}{y}$ (c) $\frac{x}{2}$ (d) $\frac{z}{x}$
7. If $\frac{6}{3\sqrt{2}-2\sqrt{3}} = 3\sqrt{2} - b\sqrt{3}$, the value of b is
 (a) -1 (b) 1 (c) -2 (d) -3
8. If $p = 2\sqrt{7} - 3\sqrt{3}$ and $Q = \frac{1}{p}$, then find the value of $p^4 - Q^4$
 (a) $2110\sqrt{3}$ (b) $-1440\sqrt{7}$ (c) $2210\sqrt{7}$ (d) $-2640\sqrt{21}$

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9. $\frac{3\sqrt{2}}{\sqrt{6}+\sqrt{3}} - \frac{2\sqrt{6}}{\sqrt{3}+1} + \frac{2\sqrt{3}}{\sqrt{6}+2}$ is equal to = ?

- (a) 3 (b) 2 (c) 0 (d) $\sqrt{3}$

10. In Fig. if $AB \parallel CD$, then the values of x and y are



- (a) $x = 24, y = 48$ (b) $x = 34, y = 68$ (c) $x = 24, y = 68$ (d) $x = 34, y = 48$

11. $\sqrt{9} + \sqrt{25-9} - 2^{\sqrt{4}} =$

- (a) 3 (b) 7 (c) 4 (d) 1

12. The heights of two vertical lamp posts are 33 m and 24 m high. If the distance between them is 40 m, then what will be the distance between their tops?

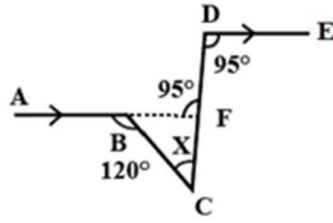
- (a) 47.89m (b) 56.56m (c) 32.81m (d) 41m

13. AD is an altitude of an isosceles triangle, then:

- (a) $BD=CD$ (b) $BD>CD$ (c) $BD<CD$ (d) None of these

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14. Find the value of x , if AB is parallel to DE in the given figure:



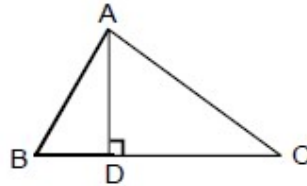
- (a) 45° (b) 25° (c) 55° (d) 35°

15. The diagonal of a square is $10\sqrt{2}$ cm then its perimeter is _____.

- (a) 10 cm (b) $40\sqrt{2}$ cm (c) 20 cm (d) 40 cm

16. If x and y are integers and $2^x \cdot 3^{2y} = 144$, then what is the value of $(x + y)$?

17. In figure $AD \perp BC$ and $BD = \frac{1}{3}CD$ and $K(CA^2 - AB^2) = BC^2$. Find constant K .



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