|  | Q- Find the value:$${(1728)}^\frac{-2}{3}$$A) $$\frac{1}{144}$$ B) 144C) $$ -\frac{1}{144}$$D) $$\frac{1}{12}$$E) None of theseAnswer: ASolution:$$\sqrt[3]{1728}=12$$$$\therefore\ {(12)}^{{-3}^{(\frac{2}{3})}} = {(12)}^{-3\times\frac{2}{3}}={12}^{-2}$$$$\therefore\ a^{-n}=\frac{1}{a^n}$$$$\therefore\ {12}^{-2}=\frac{1}{{12}^2}=\frac{1}{144}$$ | Surds & Indices | Quantitative Aptitude | Quants Calculative | Medium |
| --- | --- | --- | --- | --- | --- |
|  | Q- Find the value of: $$7^{-25}-7^{-26}$$A) $$6\times7^{-26}$$B) $$6\times7^{-25}$$C) $$7\times7^{-25}$$ D) $$7\times7^{-26}$$E) None of these Answer: ASolution:$$7^{-25}-7^{-26}=\ \frac{1}{7^{25}}-\ \frac{1}{7^{26}}=\frac{7-1}{7^{26}}=6\times7^{-26}$$ | Surds & Indices | Quantitative Aptitude | Quants Calculative | Medium |
|  | Directions: Checking Equation UploadQ- Simplify: $${(256)}^\frac{3}{4}$$A) 16B) 12C) 256D) 64E) NAAnswer: DSolution:$${(256)}^\frac{3}{4}={(4^4)}^\frac{3}{4}=4^3=64$$Q- Find the value of: $$8^{112}\div8^{110}$$A) 72B) 64C) 81D) 49E) NAAnswer: BSolution:$$\frac{a^m}{a^n}=a^{m-n}\$$$$\therefore\frac{8^{112}}{8^{110}}=8^{112-110}=8^2=64\$$Q- Find the value of x if:$$\left(\frac{p}{q}\right)^{x-1}=\left(\frac{q}{p}\right)^{x-3}$$A) 3B) 2C) 1D) -2E) All of the aboveAnswer: BSolution:$$\left(\frac{p}{q}\right)^{x-1}=\left(\frac{q}{p}\right)^{x-3}$$$$\left(\frac{p}{q}\right)^{x-1}=\left(\frac{p}{q}\right)^{-\left(x-3\right)}=\left(\frac{p}{q}\right)^{\left(3-x\right)}$$$$\therefore x-1=3-x 🡪 x=2$$ | Surds & Indices | Quantitative Aptitude | Quants Calculative | Easy |
|  | Q- If $$4^x+4^{x+1}=80$$ then the value of $$x^x$$ is:A) 16B) 9C) 25D) None of these E) 4Answer: ESolution:$$4^x+4^{x+1}=80$$$${\therefore4}^x(1+4)=80$$$${\therefore4}^x\times5=80$$$${\therefore4}^x=16$$$${\therefore4}^x=\ 4^2 🡪 x=2$$$${\therefore x}^x=\ 2^2=4$$ | Surds & Indices | Quantitative Aptitude | Quants Calculative | Medium |
|  | Q- If $$4^x+4^{x+1}=80$$then the value of $$x^x$$ is:A) 16B) 9C) 25D) None of these E) 4Answer: ESolution:$$4^x+4^{x+1}=80$$$${\therefore4}^x(1+4)=80$$$${\therefore4}^x\times5=80$$$${\therefore4}^x=16$$$${\therefore4}^x=\ 4^2 🡪 x=2$$$${\therefore x}^x=\ 2^2=4$$ | Surds & Indices | Quantitative Aptitude | Quants Calculative | Medium |
|  | Q- Find the value of x if:$$\left(\frac{p}{q}\right)^{x-1}=\left(\frac{q}{p}\right)^{x-3}$$A) 3B) 2C) 1D) -2E) All of the aboveAnswer: BSolution:$$\left(\frac{p}{q}\right)^{x-1}=\left(\frac{q}{p}\right)^{x-3}$$$$\left(\frac{p}{q}\right)^{x-1}=\left(\frac{p}{q}\right)^{-\left(x-3\right)}=\left(\frac{p}{q}\right)^{\left(3-x\right)}$$$$\therefore x-1=3-x 🡪 x=2$$ | Surds & Indices | Quantitative Aptitude | Quants Calculative | Medium |
|  | Q- Find the value of: $$8^{112}\div8^{110}$$A) 72B) 64C) 81D) 49E) NAAnswer: BSolution:$$\frac{a^m}{a^n}=a^{m-n}\$$ $$\therefore\frac{8^{112}}{8^{110}}=8^{112-110}=8^2=64\$$  | Surds & Indices | Quantitative Aptitude | Quants Calculative | Medium |