Worksheet: Power Play

Uttar Pradesh State Board · Class 8 · Mathematics · 12 questions · 27 marks

Name: _____	Date: _____	Score: _____ / 27

Q1. Simplify: $7^{3} \times 7^{u}$ *[1 mark]*

Q2. Evaluate $3^{\{}$ *[1 mark]*

Q3. The value of $3^{p} \div 3^{\{}$ is: *[1 mark]*

A) 4/3

B) 1/3

C) 1

D) 3

Q4. Simplify: $2^{u} \div 2^{\{}$ *[1 mark]*

A) 2^{1p}

B) 2^{w}

C) $2^{\{p}$

D) 2^{3}

Q5. Simplify: $(2^{\{} \times 2^{)u}) \div 2^{\{t}$ *[3 marks]*

Q6. Express the speed of light (299,792,458 m/s) in standard form to 3 significant figures. *[3 marks]*

Q7. Which of the following equals 10^7? *[1 mark]*

A) $10^2 \times 10^3$

B) $10^3 \times 10^3$

C) $10^9 \div 10^2$

D) $10^2 + 10^3$

Q8. The standard (scientific) form of 384,000 is: *[1 mark]*

A) 38.4×10^4

B) 0.384×10^6

C) 3.84×10^5

D) 3.84×10^6

Q9. Simplify $(2^3)^2 \times 2^4$ and write the answer as a single power of 2. *[2 marks]*

Q10. Express 45,00,000 in standard form, and state its power of 10. *[3 marks]*

Q11. If a virus has a diameter of 1.2×10^{-4} cm, and 1 cm of a microscope slide can fit viruses side by side, how many viruses fit in 1 cm? *[5 marks]*

Q12. A stadium can seat 6.4×10^4 people. If tickets are priced at ₹2.5×10^3 each and the stadium is completely full, find the total ticket revenue in standard form. *[5 marks]*