Name : _____ Score : _____

Teacher : _____ Date : _____

# Operations with Exponents

**Simplify the exponents.**

1) $(4b^4d)^5$

2) $6c^6 \cdot 8c^{-4} \cdot 7c^{-5}$

3) $\frac{4r^{-5}}{8r^{-3}}$

4) $(\frac{1}{k})^6 \cdot (\frac{1}{k})^4 \cdot (\frac{1}{k})^3$

5) $(\frac{d^4}{d^2})^2$

6) $(\frac{1}{4})^4 \cdot (\frac{1}{4})^3 \cdot (\frac{1}{4})^2$

7) $(r \cdot 3r^2 \cdot r^3)^3$

8) $(\frac{7d^5}{3d})^2$

9) $(\frac{6^4}{6^5})^3$

10) $\frac{5^3}{5}$

11) $(3c^2 \cdot c)^3$

12) $\frac{r^3}{r^2}$

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# Operations with Exponents

**Simplify the exponents.**

1) $(4b^4d)^5$

$1024b^{20}d^5$

2) $6c^6 \cdot 8c^{-4} \cdot 7c^{-5}$

$\frac{336}{c^3}$

3) $\frac{4r^{-5}}{8r^{-3}}$

$\frac{1}{2r^2}$

4) $(\frac{1}{k})^6 \cdot (\frac{1}{k})^4 \cdot (\frac{1}{k})^3$

$(\frac{1}{k})^{13}$

5) $(\frac{d^4}{d^2})^2$

$d^4$

6) $(\frac{1}{4})^4 \cdot (\frac{1}{4})^3 \cdot (\frac{1}{4})^2$

$(\frac{1}{4})^9$

7) $(r \cdot 3r^2 \cdot r^3)^3$

$27r^{18}$

8) $(\frac{7d^5}{3d})^2$

$\frac{49d^8}{9}$

9) $(\frac{6^4}{6^5})^3$

$\frac{1}{6^3}$

10) $\frac{5^3}{5}$

$5^2$

11) $(3c^2 \cdot c)^3$

$27c^9$

12) $\frac{r^3}{r^2}$

$r$