

Assignment

Date _____ Period _____

Solve each equation.

1) $9^{-r} \cdot \left(\frac{1}{81}\right)^{r-1} = 9$

2) $64^{2b-2} \cdot 64^{-3b} = 16^{2b+3}$

3) $\left(\frac{1}{4}\right)^{-3x} \cdot 16 = \left(\frac{1}{16}\right)^{2x+3}$

4) $\frac{1}{16} \cdot 64^{3x-1} = 64^{-x}$

5) $64 \cdot 64^{2x-2} = 16^{-x}$

6) $\frac{27^a}{\left(\frac{1}{27}\right)^{-3a}} = 81$

7) $\left(\frac{1}{625}\right)^{3x+1} \cdot 625^{3x-3} = \frac{1}{5}$

8) $\frac{16^{-3p}}{64} = 64^{-p}$

9) $\frac{216^{2a-2}}{36} = 216$

10) $\left(\frac{1}{64}\right)^{2r+1} \cdot 16^{-r} = 1$

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Date _____ Period _____

Solve each equation.

1) $9^{-r} \cdot \left(\frac{1}{81}\right)^{r-1} = 9$

$\left\{\frac{1}{3}\right\}$

2) $64^{2b-2} \cdot 64^{-3b} = 16^{2b+3}$

$\left\{-\frac{12}{7}\right\}$

3) $\left(\frac{1}{4}\right)^{-3x} \cdot 16 = \left(\frac{1}{16}\right)^{2x+3}$

$\left\{-\frac{8}{7}\right\}$

4) $\frac{1}{16} \cdot 64^{3x-1} = 64^{-x}$

$\left\{\frac{5}{12}\right\}$

5) $64 \cdot 64^{2x-2} = 16^{-x}$

$\left\{\frac{3}{8}\right\}$

6) $\frac{27^a}{\left(\frac{1}{27}\right)^{-3a}} = 81$

$\left\{-\frac{2}{3}\right\}$

7) $\left(\frac{1}{625}\right)^{3x+1} \cdot 625^{3x-3} = \frac{1}{5}$

No solution.

8) $\frac{16^{-3p}}{64} = 64^{-p}$

$\{-1\}$

9) $\frac{216^{2a-2}}{36} = 216$

$\left\{\frac{11}{6}\right\}$

10) $\left(\frac{1}{64}\right)^{2r+1} \cdot 16^{-r} = 1$

$\left\{-\frac{3}{8}\right\}$