

Math Sheet

Name _____ Score _____ / 12 Teacher _____ Date _____

Divide Powers

Subtract exponents and preserve every original restriction.

1. $\frac{6^4}{6^{-6}}$

2. $\frac{\left(\frac{1}{3}\right)^{-6}}{\left(\frac{1}{3}\right)^4}$

3. $\frac{y^2}{y^{-6}}$

Domain: real variables $y \in \mathbb{R}$ $y \neq 0$

4. $\frac{7^{-3}}{7^2}$

5. $\frac{\frac{1}{6}}{\left(\frac{1}{6}\right)^{-1}}$

6. $\frac{x^{-5}}{x^6}$

Domain: real variables $x \in \mathbb{R}$ $x \neq 0$

7. $\frac{9^2}{9^{-3}}$

8. $\frac{\left(\frac{7}{8}\right)^{-2}}{\left(\frac{7}{8}\right)^4}$

9. $\frac{y^5}{y^{-1}}$

Domain: real variables $y \in \mathbb{R}$ $y \neq 0$

10. $\frac{6^{-1}}{6^2}$

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Divide Powers

Subtract exponents and preserve every original restriction.

11.

$$\frac{\frac{5}{7}}{\left(\frac{5}{7}\right)^{-6}}$$

12.

$$\frac{x^{-6}}{x^4}$$

Domain: real variables $x \in \mathbb{R} \quad x \neq 0$

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Divide Powers

Answer Key

Subtract exponents and preserve every original restriction.

1. $\frac{6^4}{6^{-6}}$

Work:
 6^{10}

2. $\frac{\left(\frac{1}{3}\right)^{-6}}{\left(\frac{1}{3}\right)^4}$

Work:
 $\frac{1}{\left(\frac{1}{3}\right)^{10}}$

3. $\frac{y^2}{y^{-6}}$

Domain: real variables $y \in \mathbb{R}$ $y \neq 0$

Work:
 y^8

4. $\frac{7^{-3}}{7^2}$

Work:
 $\frac{1}{7^5}$

5. $\frac{\frac{1}{6}}{\left(\frac{1}{6}\right)^{-1}}$

Work:
 $\left(\frac{1}{6}\right)^2$

6. $\frac{x^{-5}}{x^6}$

Domain: real variables $x \in \mathbb{R}$ $x \neq 0$

Work:
 $\frac{1}{x^{11}}$

7. $\frac{9^2}{9^{-3}}$

Work:
 9^5

8. $\frac{\left(\frac{7}{8}\right)^{-2}}{\left(\frac{7}{8}\right)^4}$

Work:
 $\frac{1}{\left(\frac{7}{8}\right)^6}$

9. $\frac{y^5}{y^{-1}}$

Domain: real variables $y \in \mathbb{R}$ $y \neq 0$

Work:
 y^6

10. $\frac{6^{-1}}{6^2}$

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

Math Sheet

Name _____ Score _____ / 12 Teacher _____ Date _____

Divide Powers

Answer Key

Subtract exponents and preserve every original restriction.

11.
$$\frac{\frac{5}{7}}{\left(\frac{5}{7}\right)^{-6}}$$

Work:

$$\left(\frac{5}{7}\right)^7$$

12.
$$\frac{x^{-6}}{x^4}$$

Domain: real variables $x \in \mathbb{R} \quad x \neq 0$

Work:

$$\frac{1}{x^{10}}$$