

Math Sheet

Name _____ Score _____ / 14 Teacher _____ Date _____

Power of Products

Distribute each outer power to every factor.

1. 7^2

2. $(5 \cdot x^{-5})^4$

Domain: real variables $x \neq 0$

3. $(7 \cdot y^5 \cdot z^{-4})^3$

Domain: real variables $z \neq 0$

4. 3^3

5. $(2 \cdot y^5)^2$

6. $(3 \cdot x^{-6} \cdot z^3)^4$

Domain: real variables $x \neq 0$

7. 7^3

8. $(8 \cdot x^{-3})^2$

Domain: real variables $x \neq 0$

9. $(7 \cdot y^3 \cdot z^{-6})^3$

Domain: real variables $z \neq 0$

10. 6^3

11. $(2 \cdot y^2)^5$

12. $(4 \cdot x^{-4} \cdot z^5)^2$

Domain: real variables $x \neq 0$

Math Sheet

Name _____ Score _____ / 14 Teacher _____ Date _____

Power of Products

Distribute each outer power to every factor.

13. 8^2

14. $\left(7 \cdot x^{-6}\right)^4$

Domain: real variables $x \neq 0$

Math Sheet

Name _____ Score _____ / 14 Teacher _____ Date _____

Power of Products

Answer Key

Distribute each outer power to every factor.

1. 7^2

Work:
49

2. $(5 \cdot x^{-5})^4$

Domain: real variables $x \neq 0$

Work:
 $\frac{625}{x^{20}}$

3. $(7 \cdot y^5 \cdot z^{-4})^3$

Domain: real variables $z \neq 0$

Work:
 $\frac{343 \cdot y^{15}}{z^{12}}$

4. 3^3

Work:
27

5. $(2 \cdot y^5)^2$

Work:
 $4 \cdot y^{10}$

6. $(3 \cdot x^{-6} \cdot z^3)^4$

Domain: real variables $x \neq 0$

Work:
 $\frac{81 \cdot z^{12}}{x^{24}}$

7. 7^3

Work:
343

8. $(8 \cdot x^{-3})^2$

Domain: real variables $x \neq 0$

Work:
 $\frac{64}{x^6}$

9. $(7 \cdot y^3 \cdot z^{-6})^3$

Domain: real variables $z \neq 0$

Work:
 $\frac{343 \cdot y^9}{z^{18}}$

10. 6^3

Work:
216

11. $(2 \cdot y^2)^5$

Work:
 $32 \cdot y^{10}$

12. $(4 \cdot x^{-4} \cdot z^5)^2$

Domain: real variables $x \neq 0$

Work:
 $\frac{16 \cdot z^{10}}{x^8}$

Math Sheet

Name _____ Score _____ / 14 Teacher _____ Date _____

Power of Products

Answer Key

Distribute each outer power to every factor.

13. 8^2

Work:
64

14. $(7 \cdot x^{-6})^4$

Domain: real variables $x \neq 0$

Work:
$$\frac{2401}{x^{24}}$$