

Name : _____

Expanded Form & Exponential Form

T1S3

A) Express each of the following in expanded form.

1) $\left(\frac{4}{9}\right)^5 =$ _____

2) $\left(-\frac{7}{6}\right)^4 =$ _____

3) $10^6 =$ _____

4) $(-6)^8 =$ _____

5) $\left(\frac{5}{2}\right)^9 =$ _____

6) $8^7 =$ _____

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B) Express each of the following in expanded form.

1) $\left(-\frac{3}{7}\right) \cdot \left(-\frac{3}{7}\right)$ _____

2) $(-3) \cdot (-3) \cdot (-3)$ _____

3) $\frac{8}{3} \cdot \frac{8}{3} \cdot \frac{8}{3} \cdot \frac{8}{3}$ _____

4) $\left(-\frac{6}{5}\right) \cdot \left(-\frac{6}{5}\right) \cdot \left(-\frac{6}{5}\right) =$ _____

5) $(2.4) \cdot (2.4) \cdot (2.4) \cdot (2.4) \cdot (2.4) \cdot (2.4) =$ _____

6) $(-5) \cdot (-5) \cdot (-5) \cdot (-5) =$ _____

Expanded Form & Exponential Form

A) Express each of the following in expanded form.

1) $\left(\frac{4}{9}\right)^5 = \frac{4}{9} \cdot \frac{4}{9} \cdot \frac{4}{9} \cdot \frac{4}{9} \cdot \frac{4}{9}$

2) $\left(-\frac{7}{6}\right)^4 = \left(-\frac{7}{6}\right) \cdot \left(-\frac{7}{6}\right) \cdot \left(-\frac{7}{6}\right) \cdot \left(-\frac{7}{6}\right)$

3) $10^6 = 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$

4) $(-6)^8 = (-6) \cdot (-6) \cdot (-6) \cdot (-6) \cdot (-6) \cdot (-6) \cdot (-6) \cdot (-6)$

5) $\left(\frac{5}{2}\right)^9 = \frac{5}{2} \cdot \frac{5}{2} \cdot \frac{5}{2} \cdot \frac{5}{2} \cdot \frac{5}{2} \cdot \frac{5}{2} \cdot \frac{5}{2} \cdot \frac{5}{2} \cdot \frac{5}{2}$

6) $8^7 = 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8$

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B) Express each of the following in exponential form.

1) $\left(-\frac{3}{7}\right) \cdot \left(-\frac{3}{7}\right) = \left(-\frac{3}{7}\right)^2$

2) $(-3) \cdot (-3) \cdot (-3) \cdot (-3) \cdot (-3) = (-3)^5$

3) $\frac{8}{3} \cdot \frac{8}{3} \cdot \frac{8}{3} \cdot \frac{8}{3} \cdot \frac{8}{3} \cdot \frac{8}{3} \cdot \frac{8}{3} \cdot \frac{8}{3} \cdot \frac{8}{3} = \left(\frac{8}{3}\right)^9$

4) $\left(-\frac{6}{5}\right) \cdot \left(-\frac{6}{5}\right) \cdot \left(-\frac{6}{5}\right) = \left(-\frac{6}{5}\right)^3$

5) $(2.4) \cdot (2.4) \cdot (2.4) \cdot (2.4) \cdot (2.4) \cdot (2.4) = (2.4)^6$

6) $(-5) \cdot (-5) \cdot (-5) \cdot (-5) = (-5)^4$