

Name : _____

Expanded Form & Exponential Form

T1S2

A) Express each of the following in expanded form.

1) $3^4 =$

2) $\left(\frac{8}{5}\right)^6 =$

3) $\left(-\frac{3}{4}\right)^7 =$

4) $(1.7)^8 =$

5) $(-5)^2 =$

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

B) Express each of the following in exponential form.

1) $(-8) \cdot (-8) \cdot (-8)$

2) $\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2}$

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

4) $4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4$

=

5) $(-10) \cdot (-10) \cdot (-10)$

=

6) $(-6.5) \cdot (-6.5)$

=

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Expanded Form & Exponential Form

A) Express each of the following in expanded form.

1) $3^4 =$ 3 · 3 · 3 · 3

2) $\left(\frac{8}{5}\right)^6 =$ $\frac{8}{5} \cdot \frac{8}{5} \cdot \frac{8}{5} \cdot \frac{8}{5} \cdot \frac{8}{5} \cdot \frac{8}{5}$

3) $\left(-\frac{3}{4}\right)^7 =$ $\left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right)$

4) $(1.7)^8 =$ $(1.7) \cdot (1.7) \cdot (1.7) \cdot (1.7) \cdot (1.7) \cdot (1.7) \cdot (1.7) \cdot (1.7)$

5) $(-5)^2 =$ _____

6) $\left(-\frac{2}{7}\right)^3 =$ _____

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B) Express each of the following in exponential form.

1) $(-8) \cdot (-8) \cdot (-8) \cdot (-8) \cdot (-8) =$ $(-8)^5$

2) $\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} =$ $\left(\frac{1}{2}\right)^9$

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

4) $4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 =$ 4^{10}

5) $(-10) \cdot (-10) \cdot (-10) =$ $(-10)^3$

6) $(-6.5) \cdot (-6.5) =$ $(-6.5)^2$