1. Write each product as a single power.

a) 43 × 42 b) 50 × 50 c) (–2)2 × (–2)4

d) –63 × 61 e) (–7)0 × (–7)2 f) (–9)6 × (–9)3

2. Write each quotient as a single power.

a) 87 ÷ 85 b) 104 ÷ 100 c) (–1)6 ÷ (–1)3

d)  e)  f) 

3. Express as a single power.

a) 23 × 26 ÷ 29 b) (–5)8 ÷ (–5)4 × (–5)3 c) 

4. Simplify, then evaluate.

a) 22 – 20 × 2 + 23 b)(–2)6 ÷ (–2)5 – (–2)5 ÷ (–2)3

c) –22(23 ÷ 21) – 23

5. Simplify, then evaluate.

a) 43 ÷ 42 + 24 × 32 b) 32 + 42 × 41 ÷ 23 c) 

6. Write each relationship as a product of powers or a quotient of powers.

a) One million is 1000 times as great as one thousand.

b) One billion is 1000 times as great as one million.

c) One hundred is one-tenth of one thousand.

d) One is one-millionth of one million.

e) One trillion is 1000 times as great as one thousand million.

7. Identify, then correct any errors in these answers.  
Explain how you think the errors occurred.

a)53 × 52 = 56

b)23 × 42 = 85   
  
  
c)(–3)8 ÷ (–3)4 = (–3)4

d)12 × 14 – 13 = 13

e)