8.7 Practice

Go to **BigIdeasMath.com** to get HELP with solving the exercises.

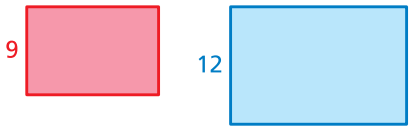
Review & Refresh

Write the number in scientific notation.

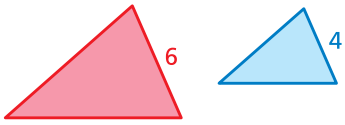
1. 0.0038 **2.** 74,000,000 **3.** 0.0000475

Find the values of the ratios (red to blue) of the perimeters and areas of the similar figures.

4.



5.



Concepts, Skills, & Problem Solving

OPERATIONS IN SCIENTIFIC NOTATION **Find the sum, difference, product, and quotient of Expression 1 and Expression 2. Write your answers in scientific notation.**
(See Explorations 1 and 2, p. 355.)

6. 3×10^3 Expression 1
2×10^3 Expression 2

7. 6×10^{-4} Expression 1
1.5×10^{-4} Expression 2

ADDING AND SUBTRACTING IN SCIENTIFIC NOTATION **Find the sum or difference. Write your answer in scientific notation.**

8. $(2 \times 10^5) + (3.8 \times 10^5)$

9. $(6.33 \times 10^{-9}) - (4.5 \times 10^{-9})$

10. $(9.2 \times 10^8) - (4 \times 10^8)$

11. $(7.2 \times 10^{-6}) + (5.44 \times 10^{-6})$

12. $(7.8 \times 10^7) - (2.45 \times 10^6)$

13. $(5 \times 10^{-5}) + (2.46 \times 10^{-3})$

14. $(9.7 \times 10^6) + (6.7 \times 10^5)$

15. $(2.4 \times 10^{-1}) - (5.5 \times 10^{-2})$

16. MP **YOU BE THE TEACHER**
Your friend adds 2.5×10^9 and 5.3×10^8. Is your friend correct? Explain your reasoning.

$$(2.5 \times 10^9) + (5.3 \times 10^8) = (2.5 \times 10^9) + (0.53 \times 10^9)$$
$$= (2.5 + 0.53) \times 10^9$$
$$= 3.03 \times 10^9$$

MULTIPLYING AND DIVIDING IN SCIENTIFIC NOTATION **Find the product or quotient. Write your answer in scientific notation.**

17. $5 \times (7 \times 10^7)$

18. $(5.8 \times 10^{-6}) \div (2 \times 10^{-3})$

19. $(1.2 \times 10^{-5}) \div 4$

20. $(5 \times 10^{-7}) \times (3 \times 10^6)$

21. $(3.6 \times 10^7) \div (7.2 \times 10^7)$

22. $(7.2 \times 10^{-1}) \times (4 \times 10^{-7})$

23. $(6.5 \times 10^8) \times (1.4 \times 10^{-5})$

24. $(2.8 \times 10^4) \div (2.5 \times 10^6)$