Lesson 76 • Volumes of Prisms and Cylinders

Power Up

- ***Facts***
- ***Mental Math***
- ***Problem Solving***

New Concepts

- ***Examples***
- ***Practice Set***

Written Practice

Facts Simplify and express in scientific notation.

$(2 \times 10^6)(3 \times 10^4)$ 6×10^{10}	$(4 \times 10^5)(6 \times 10^4)$ 2.4×10^{10}	$(2.5 \times 10^3)(3 \times 10^{-6})$ 7.5×10^{-3}
$(4 \times 10^{-3})(2 \times 10^{-4})$ 8×10^{-7}	$(5 \times 10^{-5})(3 \times 10^{-4})$ 1.5×10^{-8}	$(2.4 \times 10^{-4})(2 \times 10^6)$ 4.8×10^2

$\frac{6 \times 10^8}{3 \times 10^5}$ 2×10^3	$\frac{5 \times 10^4}{2 \times 10^8}$ 2.5×10^{-4}	$\frac{4.2 \times 10^{-3}}{2 \times 10^3}$ 2.1×10^{-6}	$\frac{2.4 \times 10^5}{4 \times 10^{-3}}$ 6×10^7

Written Practice

1. $120
2. 200
3. 76
4. yes, 9; Wendy earns 9 dollars per hour
5. 600 m^3
6. 490π m^3; 1539 m^3 or 1540 m^3
7. $1\ yd^3 \cdot \frac{3\ ft}{1\ yd} \cdot \frac{3\ ft}{1\ yd} \cdot \frac{3\ ft}{1\ yd} = 27ft^3$
8. $a = 325$, $b = 254$
9. 80 cm^2; rhombus
10. a. trapezoid
    b. 72 $in.^2$
    c. 36 in.

Written Practice *continued*

11. a. $0.\overline{142857}$

b. $0.\overline{285714}$,

c. The same 6 digits repeat in the same order, but a different digit starts the sequence of repeating digits.

12. $12\frac{1}{2}\%$

13. 14, 28, 56

14. a. $-2(x^2 + x + 1)$

b. $5x(x - 2)$

15. $y = x$

16. 5

17. $3\sqrt{3}$

18. $4\sqrt{2}$

19. $\frac{2m^5}{3x}$

20. $x = 5$

21. $x = -1$

22. $x = 12$

23. $x = 30$

24. $m = 11$

Written Practice *continued*

25. Figure *ABCD* is translated 10 units to the left and 4 units down.