Name _____ Class _____ Date _____

Practice 2-6

Formulas

Solve each formula in terms of the given variable.

1. $ad = f; a$
2. $n + 3 = q; n$
3. $2(j + k) = m; k$
4. $2s + t = r; t$
5. $m + 2n = p; n$
6. $\frac{2}{w} = \frac{x}{5}; w$
7. $5a - b = 7; a$
8. $h = \frac{p}{n}; p$
9. $5d - 2g = 9; g$
10. $x + 3y = z; x$
11. $y = mx + b; x$
12. $V = \ell wh; \ell$

The formula $A = 2h(\ell + w)$ gives the lateral area A of a rectangular solid with length ℓ, width w, and height h.

13. Solve this formula for h.
14. Find h if $A = 144$ cm^2, $\ell = 7$ cm, and $w = 5$ cm.
15. Solve this formula for ℓ.
16. Find ℓ if $A = 729.8$ in.^{2}, $h = 17.8$ in., and $w = 6.4$ in.
17. Find h if $A = 37.4$ ft^2, $\ell = 4.3$ ft, and $w = 6.7$ ft.
18. Find ℓ if $A = 9338$ m^2, $h = 29$ m, and $w = 52$ m.

The formula $P = \frac{F}{A}$ gives the pressure P for a force F and an area A.

19. Solve this formula for A.
20. Find A if $P = 14.8$ lb/in.^{2} and $F = 2960$ lb.
21. Solve this formula for F.
22. Find F if $P = 240$ lb/in.^{2} and $A = 20$ in.^{2}.
23. Find A if $P = 46.8$ lb/in.^{2} and $F = 2340$ lb.
24. Find F if $P = 24.5$ lb/in.^{2} and $A = 33.8$ in.^{2}.

Solve each formula in terms of the given variable.

25. $3n - t = s; t$
26. $\frac{b + 3}{e} = \frac{f}{2}; e$
27. $w = 2xyz; y$
28. $k = 3mh + 3; h$
29. $ab = 6 + cd; a$
30. $2a + 4b = d; b$
31. $4xy + 3 = 5z; y$
32. $-2(3a - b) = c; b$

The formula $V = \frac{1}{3}\ell wh$ gives the volume V of a rectangular pyramid with length ℓ, width w, and height h.

33. Solve this formula for w.
34. Find w if $V = 64$ m^3, $\ell = 6$ m, and $h = 4$ m.
35. Solve this formula for h.
36. Find h if $V = 30.45$ ft^3, $\ell = 6.3$ ft, and $w = 2.5$ ft.
37. Find w if $V = 2346$ in.^{3}, $\ell = 17$ in., and $h = 18$ in.
38. Find h if $V = 7$ ft^3, $\ell = \frac{7}{4}$ ft, and $w = \frac{3}{4}$ ft.

Solve each formula in terms of the given variable.

39. $2m - 3p = 1; p$
40. $a = b + cd; b$
41. $a + b = 2xz; z$
42. $x = 2y + 3z; y$
43. $\frac{a}{b} = \frac{c}{d}; d$
44. $2ab + 4 = d; a$
45. $\frac{5}{2} = \frac{1}{2}(b - c); b$
46. $d(a - b) = c; a$