What Do Biologists Do When They Visit France?

Solve each formula for the indicated variable. Circle the letter next to your answer. Write this letter in the box at the bottom of the page containing the exercise number.

1 $d = rt$, for r

- **E** $r = \frac{d}{t}$
- **M** $r = \frac{t}{d}$

2 $B = T - Lc$, for T

- **V** $T = \frac{B}{Lc}$
- **O** $T = B + Lc$

3 $S = 2\pi rh$, for h

- **L** $h = \frac{2\pi S}{r}$
- **I** $h = \frac{S}{2\pi r}$

4 $E = mc^2$, for m

- **A** $m = \frac{E}{c^2}$
- **W** $m = \frac{c^2}{E}$

5 $A = \frac{bh}{2}$, for b

- **S** $b = \frac{Ah}{2}$
- **T** $b = \frac{2A}{h}$

6 $y = mx + b$, for b

- **T** $b = \frac{mx}{y}$
- **N** $b = y - mx$

7 $y = mx + b$, for x

- **G** $x = b - my$
- **I** $x = \frac{y - b}{m}$

8 $I = \frac{E}{R}$, for E

- **E** $E = IR$
- **I** $E = \frac{I}{R}$

9 $V = \pi r^2 h$, for h

- **T** $h = \frac{\pi V}{r^2}$
- **G** $h = \frac{V}{\pi r^2}$

10 $T = p + prt$, for r

- **A** $r = \frac{T - p}{pt}$
- **K** $r = \frac{T - pt}{t}$

11 $A = \frac{\pi r^2 S}{360}$, for S

- **E** $S = \frac{360A}{\pi r^2}$
- **F** $S = \frac{360}{\pi r^2 A}$

12 $p = 2l + 2w$, for w

- **N** $w = \frac{p + l}{2}$
- **Y** $w = \frac{p - 2l}{2}$

13 $V = \frac{1}{3}Bh$, for h

- **P** $h = 3VB$
- **S** $h = \frac{3V}{B}$

14 $P = a + (n-1)b$, for b

- **H** $b = \frac{P - a}{n - 1}$
- **R** $b = \frac{(n-1)a}{P}$

15 $h = vt - 16t^2$, for v

- **S** $v = \frac{h + 16t^2}{t}$
- **B** $v = \frac{16t^2 - h}{t}$

16 $m = \frac{2E}{v^2}$, for E

- **L** $E = 2mv^2$
- **G** $E = \frac{mv^2}{2}$

17 $A = \frac{a + b + c}{3}$, for c

- **N** $c = \frac{3A}{a + b}$
- **T** $c = 3A - a - b$

18 $S = \frac{1}{2}at^2$, for t^2

- **P** $t^2 = \frac{2S}{a}$
- **F** $t^2 = \frac{2a}{S}$

19 $F = \frac{9}{5}C + 32$, for C

- **T** $C = \frac{5}{9}F + 32$
- **E** $C = \frac{5}{9}(F - 32)$

20 $V = \frac{4}{3}\pi r^3$, for r^3

- **R** $r^3 = \frac{3V}{4\pi}$
- **D** $r^3 = \frac{4V\pi}{3}$

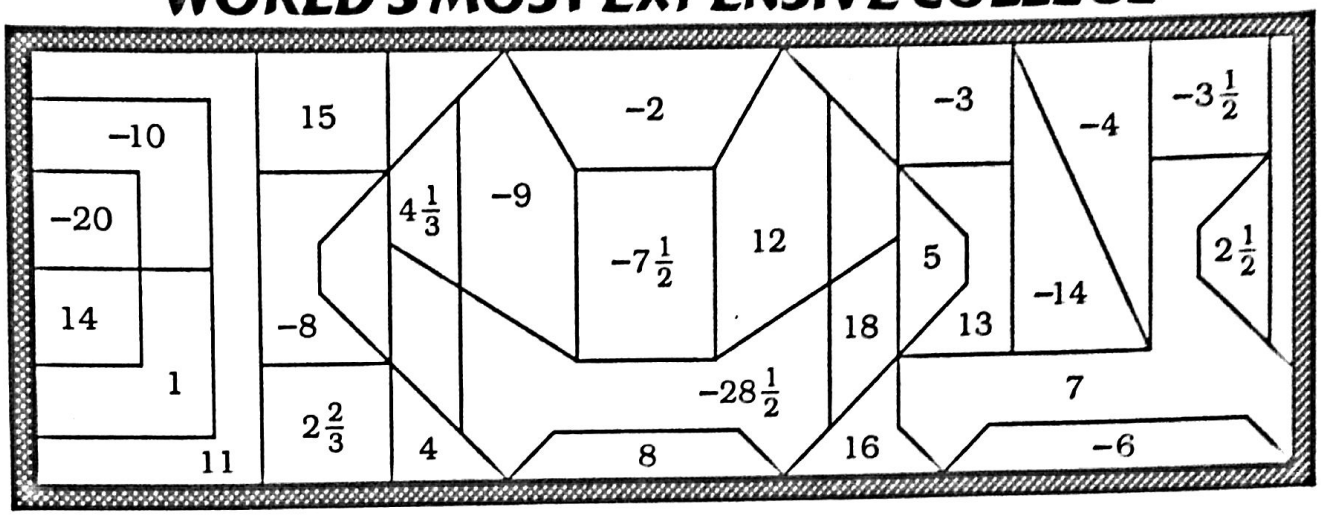
5	14	8	12	16	2	18	10	20	4	13	7	17	1	15	11	19	3	6	9

Equations and Problems
Solving a Formula for a Given Variable

Skills Workbook to this page 3.19

PUNCHLINE • Algebra • Book
©2005 Mary Mathwork

WORLD'S MOST EXPENSIVE COLLEGE



Shade in the area containing each solution.

1. $5x + 2(x + 4) = 64$

2. $9(y - 2) + 4 = 31$

3. $7 + 4(2a + 15) = -13$

4. $6(n - 5) - 11n = 0$

5. $20 = 8 + 3(12 + 4x)$

6. $-2(w - 7) + 10w = 34$

7. $9y - 4(y + 5) = 40$

8. $10 - 3(m - 2) = 8$

9. $16d - (4 - 5d) = -67$

10. $7(6x - 1) + x = 36$

11. $11 - 2(8 + 3p) = 7^2$

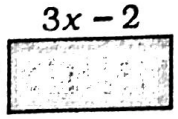
12. $\frac{1}{4}(5b + 11) = 19$

13. $\frac{2}{7}(4m - 18) = 12$

14. $75 = 3(-10t - 3) + 6t$

15. $-\frac{5}{6}(9 + 2x) = 40$

16. Write an equation and solve for x if the area of this rectangle is 133 square units.



17. The Big Screamer Coaster carries 92 people altogether. Some of its cars carry 4 passengers, and the rest carry 6 passengers. There are three less 6-passenger cars than 4-passenger cars. How many 4-passenger cars are there?

Must show work!