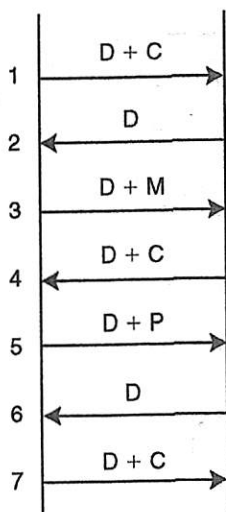


Teaching Problem/Solution

- 56** 21 circles; 6 with big stones, 10 with medium size stones, 5 with small stones
- 57** The second
- 58** Yes, the game is fair, because the chances of getting odd sums and even sums are the same.
- 59** Yolanda—144 inches (12 feet), Mandy—146 inches, Carmen—143 inches
- 60** Meg's pumpkin—60 pounds, Rico's pumpkin—135 pounds, Natalie's pumpkin—44 pounds
- 61** 14 paths
- 62** 81 planets

| Orbit | Number of Planets |
|-------|-------------------|
| 1 | 4 |
| 2 | 9 |
| 3 | 16 |
| 4 | 25 |
| 5 | 36 |
| 6 | 49 |
| 7 | 64 |
| 8 | 81 |

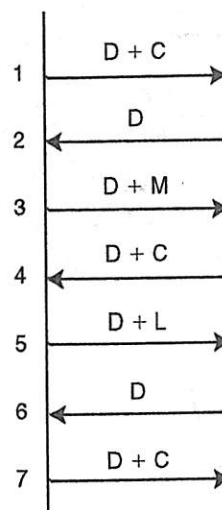
- 63** 7 trips



- 56** 21 círculos: 6 con piedras grandes, 10 con piedras medianas, 10 con piedras pequeñas
- 57** La segunda
- 58** Sí, el juego es limpio porque son iguales las oportunidades de obtener sumas con resultados de números pares e impares.
- 59** Yolanda—144 pulgadas (12 pies); Mandy,—146 pulgadas; Carmen—143 pulgadas
- 60** La calabaza de Meg—60 libras; la de Rico—135 libras; la de Natalie—4 libras
- 61** 14 maneras
- 62** 81 planetas

| Órbita | Planetas |
|--------|----------|
| 1 | 4 |
| 2 | 9 |
| 3 | 16 |
| 4 | 25 |
| 5 | 36 |
| 6 | 49 |
| 7 | 64 |
| 8 | 81 |

- 63** 7 viajes



Practice Problem/Solution

Note: The strategies shown for the Practice Problems are those which were used for solving the similar Teaching Problems. However, students' choice of strategy may vary.

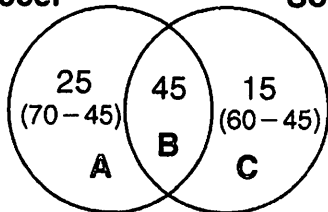
64 Elizabeth—5, Dolores—2, Tera—4

65 Alice—ranger, Bogdan—pilot, Caleb—teacher, Donna—doctor

| | Ranger | Teacher | Doctor | Pilot |
|--------|--------|---------|--------|-------|
| Alice | Yes | No | No | No |
| Bogdan | No | No | No | Yes |
| Caleb | No | Yes | No | No |
| Donna | No | No | Yes | No |

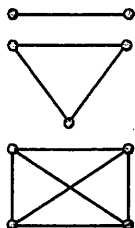
66 Total = 85

Soccer **Softball**



67 Marta—6th, Jenisha—6th, Benito—5th, Ray—6th

68 55 phone calls



| Girls | Phone Calls |
|-------|-------------|
| 2 | 1 |
| 3 | 3 |
| 4 | 6 |
| 5 | 10 |
| 6 | 15 |
| 7 | 21 |
| 8 | 28 |
| 9 | 36 |
| 10 | 45 |
| 11 | 55 |

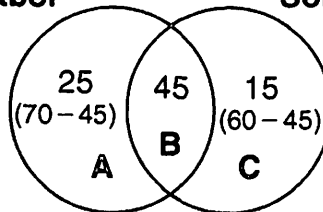
64 Elizabeth—5, Dolores—2, Tera—4

65 Alice—guarda bosques, Bogdan—piloto, Caleb—maestro, Donna—doctor

| | Guardabosques | Maestro | Doctor | Piloto |
|--------|---------------|---------|--------|--------|
| Alice | Sí | No | No | No |
| Bogdan | No | No | No | Sí |
| Caleb | No | Sí | No | No |
| Donna | No | No | Sí | No |

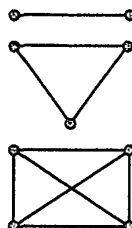
66 Total = 85

Fútbol **Sóftbol**



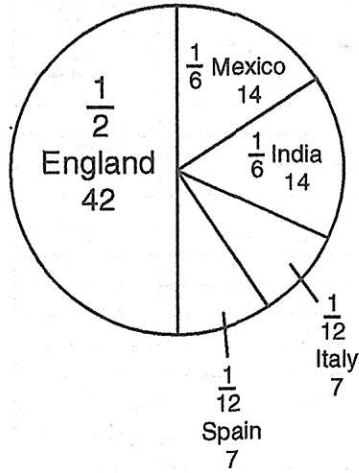
67 Marta—sexto; Jenisha—sexto; Benito—quinto; Ray—sexto

68 55 llamadas telefónicas

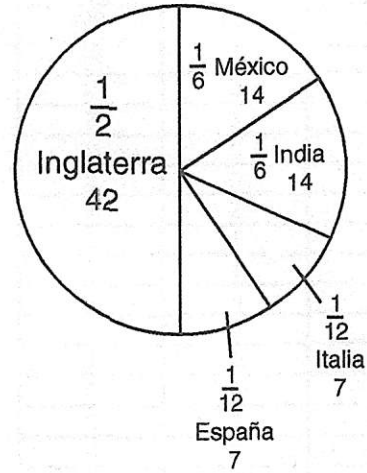


| Chicas | Llamadas |
|--------|----------|
| 2 | 1 |
| 3 | 3 |
| 4 | 6 |
| 5 | 10 |
| 6 | 15 |
| 7 | 21 |
| 8 | 28 |
| 9 | 36 |
| 10 | 45 |
| 11 | 55 |

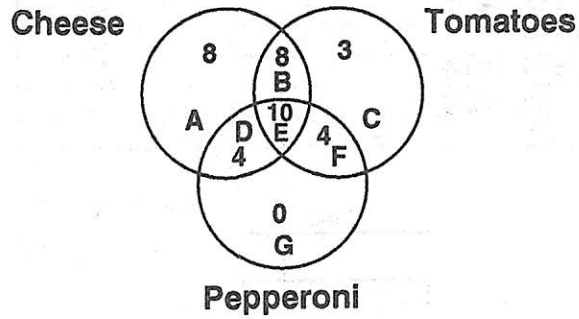
69 84 coins



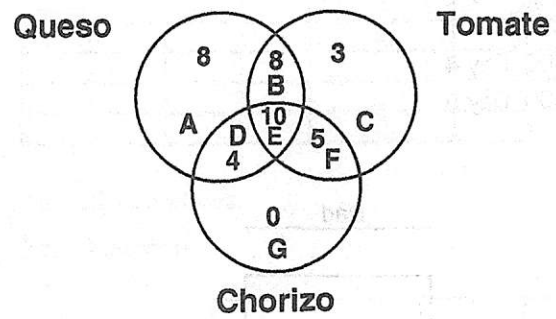
69 84 monedas



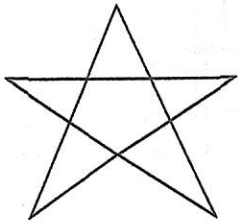
70 37 sandwiches



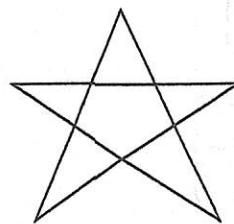
70 37



71



71



Practice Problem/Solution

72 8 times

| Colors | Times |
|--------|-------|
| 2 | 3 |
| 3 | 4 |
| 4 | 5 |
| 5 | 6 |
| 6 | 7 |
| 7 | 8 |

72 8 veces

| Colores | Veces |
|---------|-------|
| 2 | 3 |
| 3 | 4 |
| 4 | 5 |
| 5 | 6 |
| 6 | 7 |
| 7 | 8 |

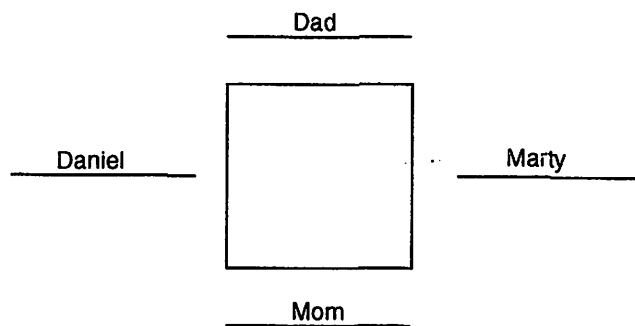
73 5 days

2,000
-100 Day 1
 1,900
-200 Day 2
 1,700
-400 Day 3
 1,300
-800 Day 4
 500 Day 5

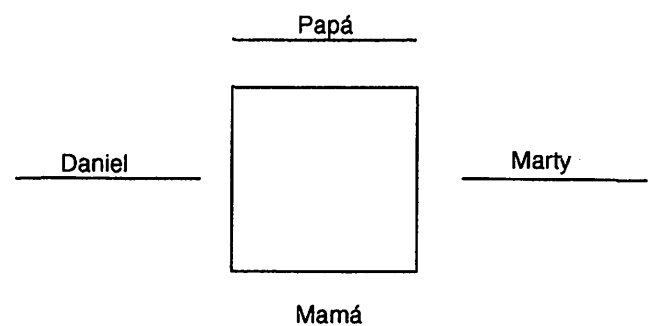
73 5 días

2,000
-100 Día 1
 1,900
-200 Día 2
 1,700
-400 Día 3
 1,300
-800 Día 4
 500 Día 5

74



74



75 21 combinations

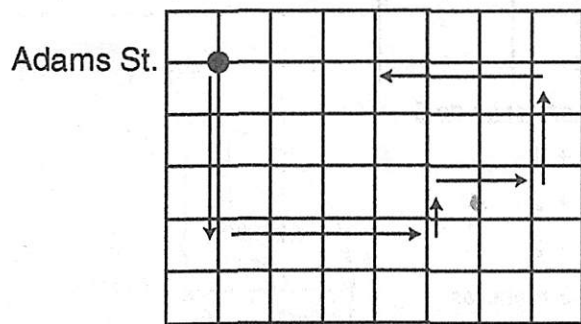
| LL | CC | TS | MM |
|----|----|----|----|
| 10 | 7 | 5 | 2 |
| 3 | 0 | 0 | 1 |
| 2 | 1 | 1 | 0 |
| 2 | 0 | 0 | 6 |
| 2 | 0 | 2 | 1 |
| 1 | 2 | 0 | 4 |
| 1 | 1 | 3 | 0 |
| 1 | 1 | 1 | 5 |
| 1 | 0 | 2 | 6 |
| 1 | 0 | 4 | 1 |
| 1 | 0 | 0 | 11 |
| 0 | 4 | 0 | 2 |
| 0 | 3 | 1 | 3 |
| 0 | 2 | 2 | 4 |
| 0 | 2 | 0 | 9 |
| 0 | 1 | 5 | 0 |
| 0 | 1 | 3 | 5 |
| 0 | 1 | 1 | 10 |
| 0 | 0 | 6 | 1 |
| 0 | 0 | 4 | 6 |
| 0 | 0 | 2 | 11 |
| 0 | 0 | 0 | 16 |

75 21 combinaciones

| MR | CC | LS | ML |
|----|----|----|----|
| 10 | 7 | 5 | 2 |
| 3 | 0 | 0 | 1 |
| 2 | 1 | 1 | 0 |
| 2 | 0 | 0 | 6 |
| 2 | 0 | 2 | 1 |
| 1 | 2 | 0 | 4 |
| 1 | 1 | 3 | 0 |
| 1 | 1 | 1 | 5 |
| 1 | 0 | 2 | 6 |
| 1 | 0 | 4 | 1 |
| 1 | 0 | 0 | 11 |
| 0 | 4 | 0 | 2 |
| 0 | 3 | 1 | 3 |
| 0 | 2 | 2 | 4 |
| 0 | 2 | 0 | 9 |
| 0 | 1 | 5 | 0 |
| 0 | 1 | 3 | 5 |
| 0 | 1 | 1 | 10 |
| 0 | 0 | 6 | 1 |
| 0 | 0 | 4 | 6 |
| 0 | 0 | 2 | 11 |
| 0 | 0 | 0 | 16 |

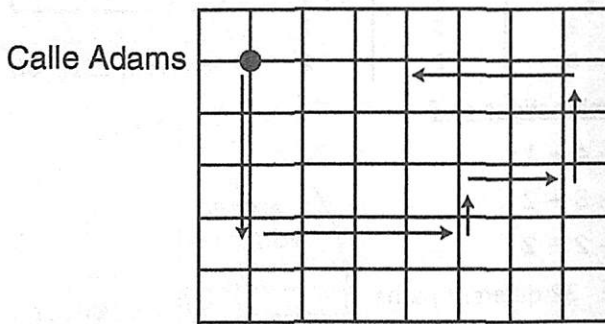
76 21 squares

77 3 blocks



76 21 cuadrados

77 3 cuadras



78

| | | | |
|---------|--------------|-------------|-----------------|
| Top: | banana chips | trail mix | sunflower seeds |
| Bottom: | malt balls | carob chips | raisins |

78

| | | | |
|---------|----------------|---------------------|---------------------|
| Arriba: | papitas fritas | trail mix | semillas de girasol |
| Abajo: | bolas de malta | cascaritas de mango | uvas pasas |

Practice Problem/Solution

79 2 times (Every 15th day; October has 31 days, so days 15 and 30.)

| Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| Jada | | | X | | | X | | | X | | | X | | | X |
| Ethan | | | | | X | | | | | X | | | | | X |

80 roses—40, lilies—25, daisies—20, ferns—10

81 50

10 left

10 lost in lake ($\frac{1}{2}$)

20 lost in ravine ($\frac{1}{2}$)

10 to brother ($\frac{1}{5}$)

82 10 ways

| Roll 1 | Roll 2 | Roll 3 |
|--------|--------|--------|
| 1 | 4 | 1 |
| 1 | 1 | 4 |
| 4 | 1 | 1 |
| 1 | 3 | 2 |
| 1 | 2 | 3 |
| 3 | 1 | 2 |
| 3 | 2 | 1 |
| 2 | 1 | 3 |
| 2 | 3 | 1 |
| 2 | 2 | 2 |

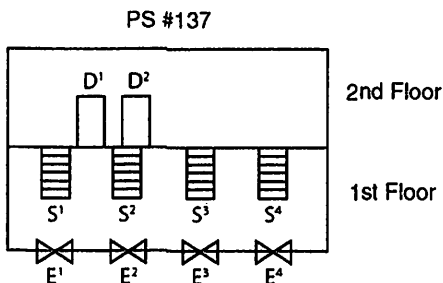
Combinations of 6

1 + 4 + 1

1 + 3 + 2

2 + 2 + 2

83 32 different paths



79 2 veces (Cada 15avo. día; octubre tiene 31 días, días 15 y 30.)

| Día | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| Jada | | | X | | | X | | | X | | | X | | | X |
| Ethan | | | | | X | | | | | X | | | | | X |

80 rosas—40, lirios—25, margaritas—20, helechos—10

81 50

10 le quedan

10 se perdieron en el lago ($\frac{1}{2}$)

20 se perdieron en el barranco ($\frac{1}{2}$)

10 a su hermano ($\frac{1}{5}$)

82 10 maneras

| Lanzada 1 | Lanzada 2 | Lanzada 3 |
|-----------|-----------|-----------|
| 1 | 4 | 1 |
| 1 | 1 | 4 |
| 4 | 1 | 1 |
| 1 | 3 | 2 |
| 1 | 2 | 3 |
| 3 | 1 | 2 |
| 3 | 2 | 1 |
| 2 | 1 | 3 |
| 2 | 3 | 1 |
| 2 | 2 | 2 |

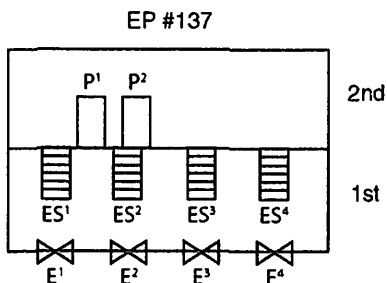
Combinaciones de 6

1 + 4 + 1

1 + 3 + 2

2 + 2 + 2

83 32 maneras



Practice Problem/Solution

84 30-cent stamps = 10
40-cent stamps = 15

| Number of stamps | 30¢ Stamps | 40¢ Stamps |
|------------------|---------------|---------------|
| 1 | \$0.30 | \$0.40 |
| 2 | \$0.60 | \$0.80 |
| 3 | \$0.90 | \$1.20 |
| 4 | \$1.20 | \$1.60 |
| 5 | \$1.50 | \$2.00 |
| 6 | \$1.80 | \$2.40 |
| 7 | \$2.10 | \$2.80 |
| 8 | \$2.40 | \$3.20 |
| 9 | \$2.70 | \$3.60 |
| 10 | <u>\$3.00</u> | \$4.00 |
| 11 | \$3.30 | \$4.40 |
| 12 | \$3.60 | \$4.80 |
| 13 | \$3.90 | \$5.20 |
| 14 | \$4.20 | \$5.60 |
| 15 | \$4.50 | <u>\$6.00</u> |

84 sellos postales de 30-centavos = 10
sellos postales de 40-centavos = 15

| Cantidad de sellos | Sellos de 30¢ | Sellos de 40¢ |
|--------------------|---------------|---------------|
| 1 | \$0.30 | \$0.40 |
| 2 | \$0.60 | \$0.80 |
| 3 | \$0.90 | \$1.20 |
| 4 | \$1.20 | \$1.60 |
| 5 | \$1.50 | \$2.00 |
| 6 | \$1.80 | \$2.40 |
| 7 | \$2.10 | \$2.80 |
| 8 | \$2.40 | \$3.20 |
| 9 | \$2.70 | \$3.60 |
| 10 | <u>\$3.00</u> | \$4.00 |
| 11 | \$3.30 | \$4.40 |
| 12 | \$3.60 | \$4.80 |
| 13 | \$3.90 | \$5.20 |
| 14 | \$4.20 | \$5.60 |
| 15 | \$4.50 | <u>\$6.00</u> |

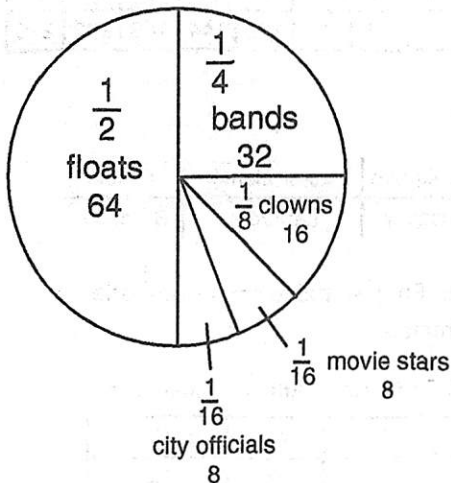
85 108 desserts

| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----------------|---|----|----|----|----|----|----|----|
| Shortcakes | 3 | 5 | 6 | 8 | 9 | 11 | 12 | 14 |
| Sundaes | 6 | 7 | 5 | 6 | 4 | 5 | 3 | 4 |
| Total Desserts | 9 | 12 | 11 | 14 | 13 | 16 | 15 | 18 |

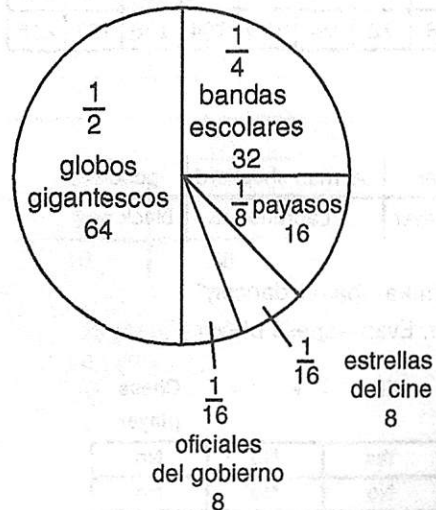
85 108 postres

| Hora | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---------------|---|----|----|----|----|----|----|----|
| Pastelitos | 3 | 5 | 6 | 8 | 9 | 11 | 12 | 14 |
| Batidos | 6 | 7 | 5 | 6 | 4 | 5 | 3 | 4 |
| Total postres | 9 | 12 | 11 | 14 | 13 | 16 | 15 | 18 |

86 128 people



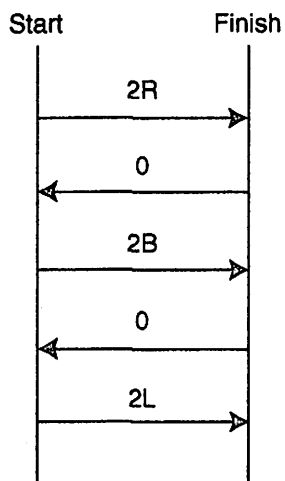
86 128 personas



Practice Problem/Solution

87 Cut XII in half horizontally; the top half is VII.

88 5 trips



89 36 lights

| | | | | | | | | |
|--------|---|---|---|----|----|----|----|----|
| Rows | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Lights | 1 | 3 | 6 | 10 | 15 | 21 | 28 | 36 |

90 Picnics = 81, Softball = 72, Pool = 63

| | | | | | | | | | |
|----------|----|----|----|----|-----|-----|-----|-----|-----|
| Picnics | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 |
| Softball | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 |
| Pool | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 |
| Total | 24 | 48 | 72 | 96 | 120 | 144 | 168 | 192 | 216 |

91

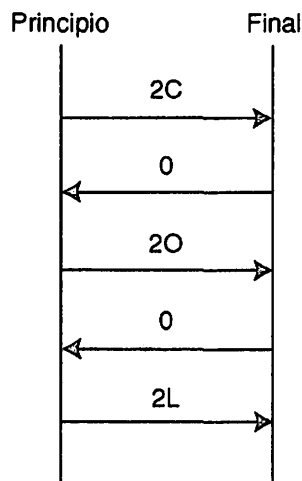
| | | | |
|--------|------------------|-----------------|-----------|
| Front: | Irish setter | German shepherd | poodle |
| Back: | golden retriever | Labrador | black pug |

92 Val—biker, Emika—ballet dancer, Trina—runner, Evan—chess player

| | | | | |
|-------|---------------|-------|--------|--------------|
| | Ballet dancer | Biker | Runner | Chess player |
| Val | No | Yes | No | No |
| Emika | Yes | No | No | No |
| Trina | No | No | Yes | No |
| Evan | No | No | No | Yes |

87 Cortar XII por la mitad horizontalmente, la parte superior será VII.

88 5 viajes



89 36 luces

| | | | | | | | | |
|-------|---|---|---|----|----|----|----|----|
| Filas | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Luces | 1 | 3 | 6 | 10 | 15 | 21 | 28 | 36 |

90 Picnics = 81, Sóftbol = 72, Piscina = 63

| | | | | | | | | | |
|---------|----|----|----|----|-----|-----|-----|-----|-----|
| Picnics | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 |
| Sóftbol | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 |
| Piscina | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 |
| Total | 24 | 48 | 72 | 96 | 120 | 144 | 168 | 192 | 216 |

91

| | | | |
|---------|------------------|---------------|----------|
| Frente: | Perro perdiguero | Pastor alemán | Poodle |
| Atrás: | Perro cazador | Labrador | Boxeador |

92 Val—ciclista, Emika—bailarina, Trina—atleta, Evan—ajedrecista

| | | | | |
|-------|-----------|----------|--------|-------------|
| | Bailarina | Ciclista | Atleta | Ajedrecista |
| Val | No | Sí | No | No |
| Emika | Sí | No | No | No |
| Trina | No | No | Sí | No |
| Evan | No | No | No | Sí |

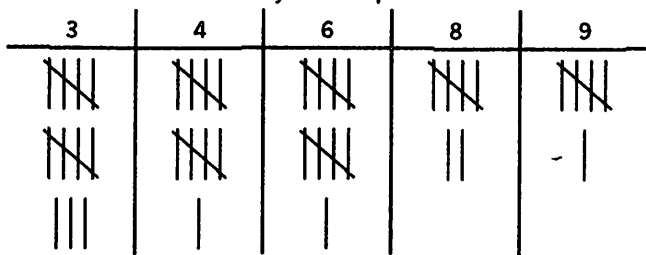
Practice Problem/Solution

93 Fair game; there are 16 ways for each player to get points.

Products of numbers on spinners A and B:

- | | |
|--------------------|--------------------|
| $1 \times 6 = 6$ | $3 \times 6 = 18$ |
| $1 \times 8 = 8$ | $3 \times 8 = 24$ |
| $1 \times 9 = 9$ | $3 \times 9 = 27$ |
| $1 \times 12 = 12$ | $3 \times 12 = 36$ |
| $2 \times 6 = 12$ | $4 \times 6 = 24$ |
| $2 \times 8 = 16$ | $4 \times 8 = 32$ |
| $2 \times 9 = 18$ | $4 \times 9 = 36$ |
| $2 \times 12 = 24$ | $4 \times 12 = 48$ |

Tally of Multiples



94 Ace - 4 - 3 - 5 - 2 - 7 - 6

95 100 tiles

| Rows | Tiles |
|------|-------|
| 1 | 1 |
| 2 | 3 |
| 3 | 6 |
| 4 | 10 |
| 5 | 15 |
| 6 | 21 |
| 7 | 28 |
| 8 | 36 |
| 9 | 45 |
| 10 | 55 |

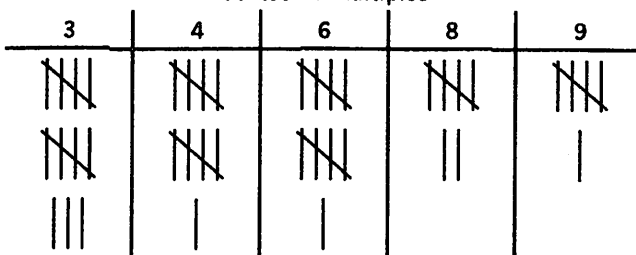
$$\begin{array}{r} 55 \text{ (rows 1-10)} \\ +45 \text{ (rows 11-19)} \\ \hline 100 \end{array}$$

93 Juego limpio

Producto de los números en la rueda giratoria A y B

- | | |
|--------------------|--------------------|
| $1 \times 6 = 6$ | $3 \times 6 = 18$ |
| $1 \times 8 = 8$ | $3 \times 8 = 24$ |
| $1 \times 9 = 9$ | $3 \times 9 = 27$ |
| $1 \times 12 = 12$ | $3 \times 12 = 36$ |
| $2 \times 6 = 12$ | $4 \times 6 = 24$ |
| $2 \times 8 = 16$ | $4 \times 8 = 32$ |
| $2 \times 9 = 18$ | $4 \times 9 = 36$ |
| $2 \times 12 = 24$ | $4 \times 12 = 48$ |

Conteo de múltiplos



94 As - 4 - 3 - 5 - 2 - 7 - 6

95 100 mosaicos

| Filas | Mosaicos |
|-------|----------|
| 1 | 1 |
| 2 | 3 |
| 3 | 6 |
| 4 | 10 |
| 5 | 15 |
| 6 | 21 |
| 7 | 28 |
| 8 | 36 |
| 9 | 45 |
| 10 | 55 |

$$\begin{array}{r} 55 \text{ (filas 1-10)} \\ +45 \text{ (filas 11-19)} \\ \hline 100 \end{array}$$

Practice Problem/Solution

96 black—16, blue—22, red—17

97 63 cabins

| Day | 1 | 2 | 3 | 4 | 5 | 6 |
|---------|---|---|----|----|----|------------|
| Campers | 4 | 8 | 16 | 32 | 64 | 128 |
| Cabins | 1 | 2 | 4 | 8 | 16 | 32 |
| | | | | | | Total = 63 |

98 7 quarts = 224 ounces; mango juice = 64 ounces;
orange juice = 160 ounces

99 29 combinations

| \$5 | \$3 | \$2 | \$1 |
|-----|-----|-----|-----|
| 2 | 0 | 1 | 0 |
| 2 | 0 | 0 | 2 |
| 1 | 2 | 0 | 1 |
| 1 | 1 | 2 | 0 |
| 1 | 1 | 1 | 2 |
| 1 | 1 | 0 | 4 |
| 1 | 0 | 3 | 1 |
| 1 | 0 | 2 | 3 |
| 1 | 0 | 1 | 5 |
| 1 | 0 | 0 | 7 |
| 0 | 4 | 0 | 0 |
| 0 | 3 | 1 | 1 |
| 0 | 3 | 0 | 3 |
| 0 | 2 | 3 | 0 |
| 0 | 2 | 2 | 2 |
| 0 | 2 | 1 | 4 |
| 0 | 2 | 0 | 6 |
| 0 | 1 | 4 | 1 |
| 0 | 1 | 3 | 3 |
| 0 | 1 | 2 | 5 |
| 0 | 1 | 1 | 7 |
| 0 | 1 | 0 | 9 |
| 0 | 0 | 6 | 0 |
| 0 | 0 | 5 | 2 |
| 0 | 0 | 4 | 4 |
| 0 | 0 | 3 | 6 |
| 0 | 0 | 2 | 8 |
| 0 | 0 | 1 | 10 |
| 0 | 0 | 0 | 12 |

96 negra—16, azul—22, roja—17

97 63 cabinas

| Dfa | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------|---|---|----|----|----|------------|
| Campistas | 4 | 8 | 16 | 32 | 64 | 128 |
| Cabinas | 1 | 2 | 4 | 8 | 16 | 32 |
| | | | | | | Total = 63 |

98 7 cuartos = 224 onzas; jugo de mango = 64 onzas;
jugo de naranja = 160 onzas

99 29 combinaciones

| \$5 | \$3 | \$2 | \$1 |
|-----|-----|-----|-----|
| 2 | 0 | 1 | 0 |
| 2 | 0 | 0 | 2 |
| 1 | 2 | 0 | 1 |
| 1 | 1 | 2 | 0 |
| 1 | 1 | 1 | 2 |
| 1 | 1 | 0 | 4 |
| 1 | 0 | 3 | 1 |
| 1 | 0 | 2 | 3 |
| 1 | 0 | 1 | 5 |
| 1 | 0 | 0 | 7 |
| 0 | 4 | 0 | 0 |
| 0 | 3 | 1 | 1 |
| 0 | 3 | 0 | 3 |
| 0 | 2 | 3 | 0 |
| 0 | 2 | 2 | 2 |
| 0 | 2 | 1 | 4 |
| 0 | 2 | 0 | 6 |
| 0 | 1 | 4 | 1 |
| 0 | 1 | 3 | 3 |
| 0 | 1 | 2 | 5 |
| 0 | 1 | 1 | 7 |
| 0 | 1 | 0 | 9 |
| 0 | 0 | 6 | 0 |
| 0 | 0 | 5 | 2 |
| 0 | 0 | 4 | 4 |
| 0 | 0 | 3 | 6 |
| 0 | 0 | 2 | 8 |
| 0 | 0 | 1 | 10 |
| 0 | 0 | 0 | 12 |

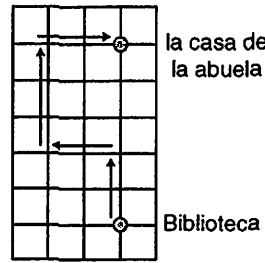
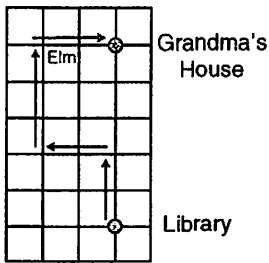
Practice Problem/Solution

100 Falcons—16, Bears—24, Eagles—22, Lions—18

100 Falcones—16, Osos—24, Águilas—22, Leones—18

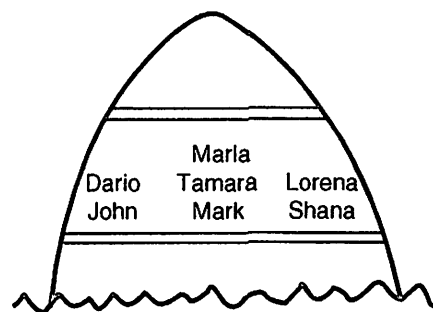
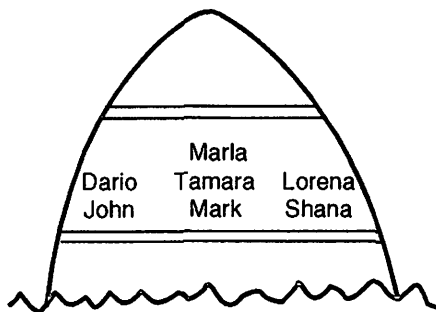
101 5 blocks

101 5 cuadras



102

102



103 5 times: July 12 and 24; August 5, 17, and 29 (every 12th day)

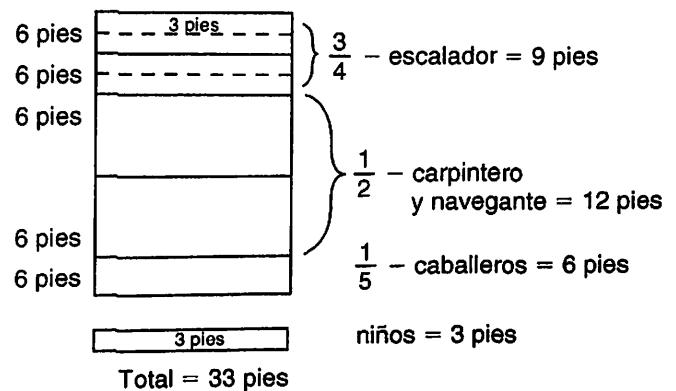
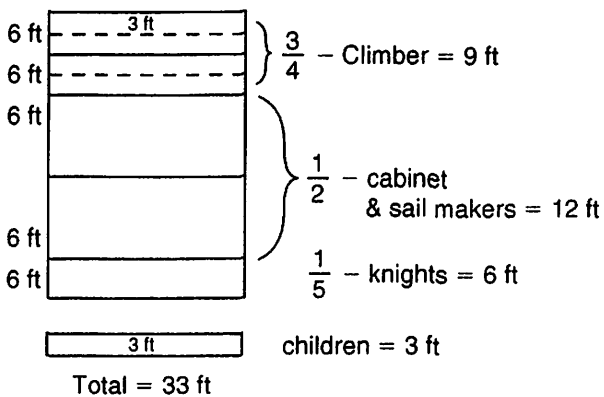
103 5 veces: Julio 12 y 24; Agosto 5, 17, y 29 (cada 12avo. día)

| | 6/1 | 6/2 | 6/3 | 6/4 | 6/5 | 6/6 | 6/7 | 6/8 | 6/9 | 6/10 | 6/11 | 6/12 |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| Trash | | | | | | X | | | | | | X |
| Walk dog | | | X | | | X | | | X | | | X |
| Clean cages | | | | | | | | | | | | X |

| | 6/1 | 6/2 | 6/3 | 6/4 | 6/5 | 6/6 | 6/7 | 6/8 | 6/9 | 6/10 | 6/11 | 6/12 |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| Basura | | | | | | X | | | | | | X |
| Pasear perro | | | X | | | X | | | X | | | X |
| Limpiar jaula | | | | | | | | | | | | X |

104 33 feet

104 33 pies



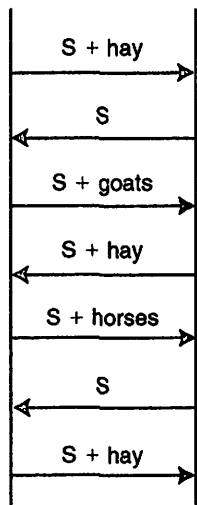
Practice Problem/Solution

- 105** 3 half-dollars, 2 quarters, 4 dimes, 3 nickels, 5 pennies
 4 half-dollars, 3 quarters, 5 dimes, 4 nickels, 6 pennies
 5 half-dollars, 4 quarters, 6 dimes, 5 nickels, 7 pennies

| Half-dollars | Quarters | Dimes | Nickels | Pennies | Total Value |
|--------------|----------|-------|---------|---------|-------------|
| 2 | 1 | 3 | 2 | 4 | \$1.69 |
| 3 | 2 | 4 | 3 | 5 | \$2.60* |
| 4 | 3 | 5 | 4 | 6 | \$3.51* |
| 5 | 4 | 6 | 5 | 7 | \$4.42* |
| 6 | 5 | 7 | 6 | 8 | \$5.33 |

* Possible combinations

- 106** Carol and Darryl, Cheryl and Merrill
107 7 trips



- 108** Delenia

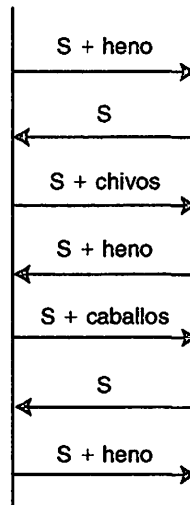
| Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|
| Diana | 80 | 79 | 77 | 76 | 74 | 73 | 71 | 70 | 68 | 67 | 65 | 64 |
| Delenia | 80 | 76 | 77 | 73 | 74 | 70 | 71 | 67 | 68 | 64 | 65 | 61 |

- 105** 3 medio dólar, 2 quarters, 4 dimes, 3 nickels, 5 pennies
 4 medio dólar, 3 quarters, 5 dimes, 4 nickels, 6 pennies
 5 medio dólar, 4 quarters, 6 dimes, 5 nickels, 7 pennies

| Medio dólar | Quarters | Dimes | Nickels | Pennies | Valor total |
|-------------|----------|-------|---------|---------|-------------|
| 2 | 1 | 3 | 2 | 4 | \$1.69 |
| 3 | 2 | 4 | 3 | 5 | \$2.60* |
| 4 | 3 | 5 | 4 | 6 | \$3.51* |
| 5 | 4 | 6 | 5 | 7 | \$4.42* |
| 6 | 5 | 7 | 6 | 8 | \$5.33 |

* Possible combinations

- 106** Carol y Darryl, Cheryl y Merrill
107 7 viajes

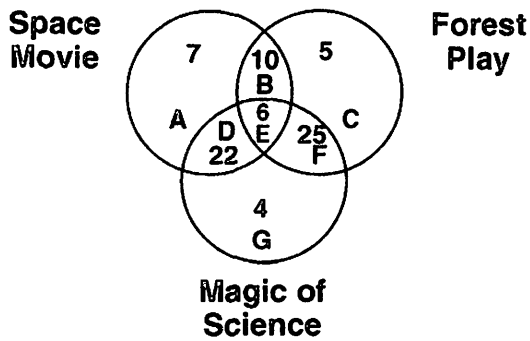


- 108** Delenia

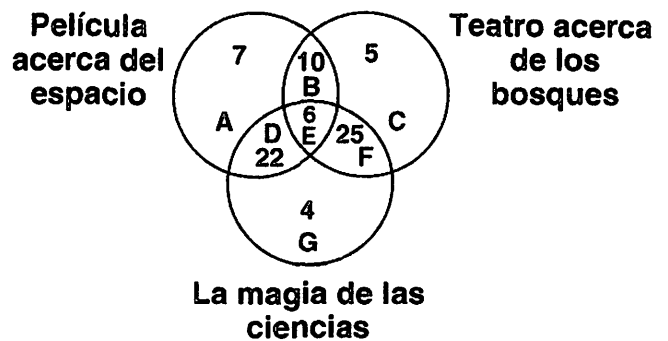
| Día | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|
| Diana | 80 | 79 | 77 | 76 | 74 | 73 | 71 | 70 | 68 | 67 | 65 | 64 |
| Delenia | 80 | 76 | 77 | 73 | 74 | 70 | 71 | 67 | 68 | 64 | 65 | 61 |

Practice Problem/Solution

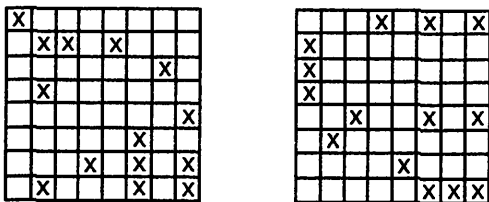
109 Total = 79 people



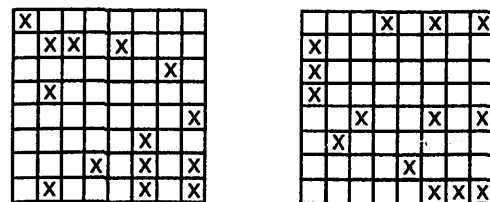
109 Total = 79 personas



110



110



111 28 eggs

| Layers | Eggs | Change |
|--------|------|--------|
| 1 | 1 | |
| 2 | 3 | (+2) |
| 3 | 6 | (+3) |
| 4 | 10 | (+4) |
| 5 | 15 | (+5) |
| 6 | 21 | (+6) |
| 7 | 28 | (+7) |

111 28 huevos

| Capas | Huevos | Cambio |
|-------|--------|--------|
| 1 | 1 | |
| 2 | 3 | (+2) |
| 3 | 6 | (+3) |
| 4 | 10 | (+4) |
| 5 | 15 | (+5) |
| 6 | 21 | (+6) |
| 7 | 28 | (+7) |

112 Total = 264: 120 powerboats, 18 kayaks, 84 sailboats, 42 rowboats

| | | | | | | |
|-------------------|----|----|----|----|-----|-----|
| Powerboats | 20 | 40 | 60 | 80 | 100 | 120 |
| Rowboats | 7 | 14 | 21 | 28 | 35 | 42 |
| Sailboats | 14 | 28 | 42 | 56 | 70 | 84 |
| Kayaks | 3 | 6 | 9 | 12 | 15 | 18 |

Total = 264

112 Total = 264: 120 a motor, 18 canoas, 84 de velas, 42 de remos

| | | | | | | |
|----------------|----|----|----|----|-----|-----|
| A motor | 20 | 40 | 60 | 80 | 100 | 120 |
| Remos | 7 | 14 | 21 | 28 | 35 | 42 |
| Velas | 14 | 28 | 42 | 56 | 70 | 84 |
| Canoas | 3 | 6 | 9 | 12 | 15 | 18 |

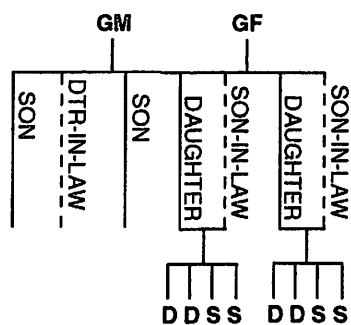
Total = 264

113 Cats—41, dogs—35, birds—25

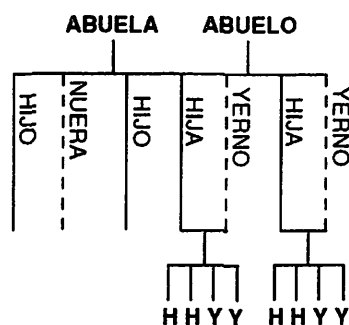
113 Gatos—41, perros—35, pájaros—25

Practice Problem/Solution

114 17 chairs



114 17 sillas



115 Libby—skateboard, Yoeman—bus, Wilbur—bike, Zack—rollerblades, Veruschka—subway

| | Skateboard | Bus | Skates | Bike | Subway |
|-----------|------------|-----|--------|------|--------|
| Libby | Yes | No | No | No | No |
| Yoeman | No | Yes | No | No | No |
| Wilbur | No | No | No | Yes | No |
| Zack | No | No | Yes | No | No |
| Veruschka | No | No | No | No | Yes |

115 Libby—patineta; Yoeman—autobús; Wilbur—bicicleta; Zack—patines; Veruschka—metro

| | Patineta | Autobús | Patines | Bicicleta | Metro |
|-----------|----------|---------|---------|-----------|-------|
| Libby | Sí | No | No | No | No |
| Yoeman | No | Sí | No | No | No |
| Wilbur | No | No | No | Sí | No |
| Zack | No | No | Sí | No | No |
| Veruschka | No | No | No | No | Sí |

116 78 ropes

| Poles | Ropes |
|-------|-------|
| 2 | 1 |
| 3 | 3 |
| 4 | 6 |
| 5 | 10 |
| 6 | 15 |
| 7 | 21 |
| 8 | 28 |
| 9 | 36 |
| 10 | 45 |
| 11 | 55 |
| 12 | 66 |
| 13 | 78 |

116 78 cuerdas

| Postes | Cuerda |
|--------|--------|
| 2 | 1 |
| 3 | 3 |
| 4 | 6 |
| 5 | 10 |
| 6 | 15 |
| 7 | 21 |
| 8 | 28 |
| 9 | 36 |
| 10 | 45 |
| 11 | 55 |
| 12 | 66 |
| 13 | 78 |

Practice Problem/Solution

117 5 fish with 5 spots

| | 5 spots | 6 spots |
|----|---------|---------|
| 1 | 5 | 6 |
| 2 | 10 | 12 |
| 3 | 15 | 18 |
| 4 | 20 | 24 |
| 5 | 25 | 30 |
| 6 | 30 | 36 |
| 7 | 35 | 42 |
| 8 | 40 | 48 |
| 9 | 45 | 54 |
| 10 | 50 | 60 |
| 11 | 55 | 66 |
| 12 | 60 | 72 |
| 13 | 65 | 78 |
| 14 | 70 | 84 |
| 15 | 75 | 90 |
| 16 | 80 | 96 |
| 17 | 85 | 102 |
| 18 | 90 | 108 |
| 19 | 95 | 114 |

117 5 peces con 5 manchas

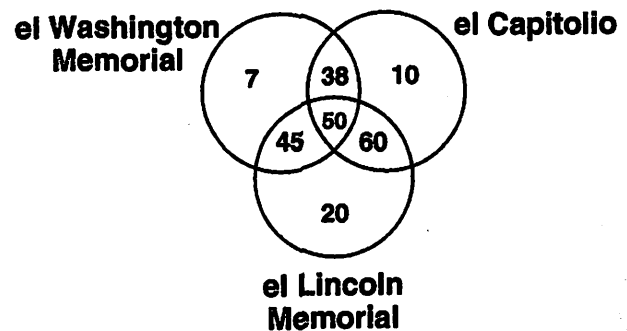
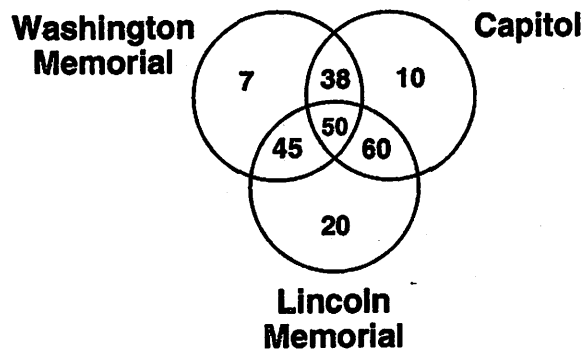
| | 5 manchas | 6 manchas |
|----|-----------|-----------|
| 1 | 5 | 6 |
| 2 | 10 | 12 |
| 3 | 15 | 18 |
| 4 | 20 | 24 |
| 5 | 25 | 30 |
| 6 | 30 | 36 |
| 7 | 35 | 42 |
| 8 | 40 | 48 |
| 9 | 45 | 54 |
| 10 | 50 | 60 |
| 11 | 55 | 66 |
| 12 | 60 | 72 |
| 13 | 65 | 78 |
| 14 | 70 | 84 |
| 15 | 75 | 90 |
| 16 | 80 | 96 |
| 17 | 85 | 102 |
| 18 | 90 | 108 |
| 19 | 95 | 114 |

118 384 students: soccer = 128, baseball or softball = 128, basketball = 64, movies = 32, read or computer or TV = 32

118 384 estudiantes: fútbol, = 128, béisbol o sóftbol = 128, básquetbol = 64, cine = 32, leer o computadora o TV = 32

119 Total = 230 students

119 Total = 230 estudiantes



Practice Problem/Solution

- 120** 1. $FF\frac{1}{2}\frac{1}{2}\frac{1}{2}EE$
 2. $FFF\frac{1}{2}EEE$
 3. $FF\frac{1}{2}\frac{1}{2}\frac{1}{2}EE$
 or
 1. $FFF\frac{1}{2}EEE$
 2. $FFF\frac{1}{2}EEE$
 3. $F\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}E$

121

| | | | | |
|--------|---------|------|-------|-------|
| Front: | Greg | Mary | Mike | Jenny |
| Back: | Justina | Ben | Annie | Carl |

122 Hot dogs—144, hamburgers—192

123 2 times (every 21 days)

| Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---------|---|---|---|---|---|---|---|---|---|
| Toad | | | X | | | X | | | X |
| Raccoon | | | | | | | X | | |

| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|----|----|----|----|----|----|----|----|----|----|----|----|
| | | X | | | X | | | X | | | X |
| | | | X | | | | | | | | X |

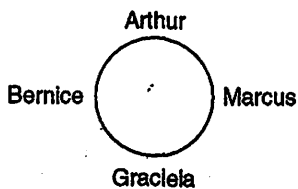
124 8 rows

| Row | Octagons | Squares | Tiles in Row | Total Tiles |
|-----|----------|---------|--------------|-------------|
| 1 | 1 | 0 | 1 | 1 |
| 2 | 2 | 1 | 3 | 4 |
| 3 | 3 | 2 | 5 | 9 |
| 4 | 4 | 3 | 7 | 16 |
| 5 | 5 | 4 | 9 | 25 |
| 6 | 6 | 5 | 11 | 36 |
| 7 | 7 | 6 | 13 | 49 |
| 8 | 8 | 7 | 15 | 64 |

125 Ava—C, Esmeralda—B, Madison—A

126 E – the hexagonal prism

127



- 120** 1. $FF\frac{1}{2}\frac{1}{2}\frac{1}{2}EE$
 2. $FFF\frac{1}{2}EEE$
 3. $FF\frac{1}{2}\frac{1}{2}\frac{1}{2}EE$
 or
 1. $FFF\frac{1}{2}EEE$
 2. $FFF\frac{1}{2}EEE$
 3. $F\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}E$

121

| | | | | |
|-----------|---------|------|-------|-------|
| Adelante: | Greg | Mary | Mike | Jenny |
| Atrás: | Justina | Ben | Annie | Carl |

122 Perros calientes—144, hamburguesas—192

123 2 veces (cada 21 días)

| Día | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---------|---|---|---|---|---|---|---|---|---|
| Sapo | | | X | | | X | | | X |
| Mapache | | | | | | | X | | |

| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|----|----|----|----|----|----|----|----|----|----|----|----|
| | | X | | | X | | | X | | | X |
| | | | X | | | | | | | | X |

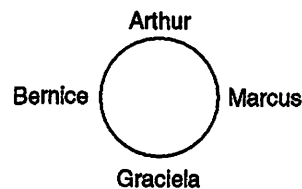
124 8 filas

| Fila | Octágono | Cuadrada | Baldosas en 1 fila | Total baldosas |
|------|----------|----------|--------------------|----------------|
| 1 | 1 | 0 | 1 | 1 |
| 2 | 2 | 1 | 3 | 4 |
| 3 | 3 | 2 | 5 | 9 |
| 4 | 4 | 3 | 7 | 16 |
| 5 | 5 | 4 | 9 | 25 |
| 6 | 6 | 5 | 11 | 36 |
| 7 | 7 | 6 | 13 | 49 |
| 8 | 8 | 7 | 15 | 64 |

125 Ava—C, Esmeralda—B, Madison—A

126 E – el prisma hexagonal

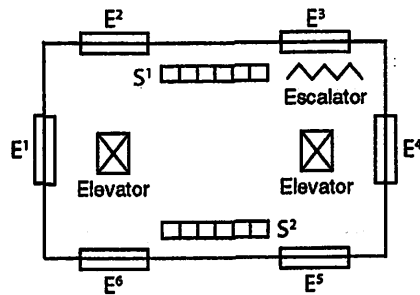
127



Practice Problem/Solution

128 20 meters and 175 millimeters; 20.175 m

129 30 ways



130 Big Chill—72, Bumper Blast—42, Wild Water—60, Space Safari—30

| | | | | | | |
|--------------|----|----|-----|-----|-----|-----|
| Big Chill | 12 | 24 | 36 | 48 | 60 | 72 |
| Bumper Blast | 7 | 14 | 21 | 28 | 35 | 42 |
| Wild Water | 10 | 20 | 30 | 40 | 50 | 60 |
| Space Safari | 5 | 10 | 15 | 20 | 25 | 30 |
| Total | 34 | 68 | 102 | 136 | 170 | 204 |

131 Abby—35, Jill—32

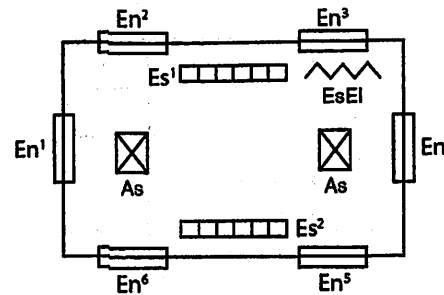
| | | | | | | |
|-------------------|---|----|----|----|----|----|
| 15-minute periods | 1 | 2 | 3 | 4 | 5 | 6 |
| Abby | 5 | 9 | 14 | 20 | 27 | 35 |
| Jill | 7 | 10 | 14 | 19 | 25 | 32 |

132 60

- Kendra = 5
- Kasey ($\frac{1}{3}$ of 15) = 5
- Kelly ($\frac{1}{3}$ of 15) = 5
- Darlene ($\frac{1}{2}$ of 30) = 15
- Ken ($\frac{2}{5}$ of 50) = 20
- Mom ($\frac{1}{6}$) = 10

128 20 metros y 175 milímetros; 20.175 m

129 30 maneras



130 Montaña Rusa—72, Carritos chocadores—42, Tobogán acuático—60, Safari espacial—30

| | | | | | | |
|---------------------|----|----|-----|-----|-----|-----|
| Montaña rusa | 12 | 24 | 36 | 48 | 60 | 72 |
| Carritos chocadores | 7 | 14 | 21 | 28 | 35 | 42 |
| Tobogán acuático | 10 | 20 | 30 | 40 | 50 | 60 |
| Safari espacial | 5 | 10 | 15 | 20 | 25 | 30 |
| Total | 34 | 68 | 102 | 136 | 170 | 204 |

131 Abby—35, Jill—32

| | | | | | | |
|-----------------------|---|----|----|----|----|----|
| Periodo de 15 minutos | 1 | 2 | 3 | 4 | 5 | 6 |
| Abby | 5 | 9 | 14 | 20 | 27 | 35 |
| Jill | 7 | 10 | 14 | 19 | 25 | 32 |

132 60

- Kendra = 5
- Kasey ($\frac{1}{3}$) = 5
- Kelly ($\frac{1}{3}$) = 5
- Darlene ($\frac{1}{2}$) = 15
- Ken ($\frac{2}{5}$) = 20
- Mom ($\frac{1}{6}$) = 10

Practice Problem/Solution

133 Not fair; there are 9 possible odd products, and 27 possible even products.

| | | | | | | |
|---|---|----|----|----|----|----|
| x | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 |

134 A, C, and D are true. The spinner should be $\frac{4}{8}$ red, $\frac{3}{8}$ yellow, $\frac{1}{16}$ blue, and $\frac{1}{16}$ orange.

135 Not a fair game; the chances of the spinner landing on the same color as the cube are $\frac{9}{24}$; the chances of the spinner landing on a different color than the cube are $\frac{15}{24}$; so Cordell has the advantage.

136 Not a fair game. All 3 the same = 2 out of 8 possible outcomes; only 2 the same = 6 out of 8 possible outcomes; 2×2 points = 4 points; 6×1 point = 6 points

Possible Outcomes:

| Penny 1 | Penny 2 | Penny 3 |
|---------|---------|---------|
| tails | tails | tails |
| tails | tails | heads |
| tails | heads | tails |
| tails | heads | heads |
| heads | heads | heads |
| heads | heads | tails |
| heads | tails | heads |
| heads | tails | tails |

133 No es justo; hay 9 posibilidades de que el producto sea impar y 27 posibilidades de que el producto sea par.

| | | | | | | |
|---|---|----|----|----|----|----|
| x | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 |

134 A, C, y D son ciertas. La rueda debe tener $\frac{4}{8}$ rojo, $\frac{3}{8}$ amarillo, $\frac{1}{16}$ azul y $\frac{1}{16}$ anaranjado.

135 No es un juego limpio; las probabilidades de que la rueda pare en el mismo color que el cubo que se saque son $\frac{9}{24}$; las probabilidades de que la rueda pare en un color diferente que el color del cubo que se saque de la bolsa son $\frac{15}{24}$; Cordell tiene más probabilidades de ganar.

136 No es un juego limpio. Los 3 son lo mismo = 2 de 8 probabilidades; sólo 2 de lo mismo = 6 de 8 probabilidades; 2×2 puntos = 4 puntos; 6×1 punto = 6 puntos

Probabilidades:

| Penny 1 | Penny 2 | Penny 3 |
|---------|---------|---------|
| cruz | cruz | cruz |
| cruz | cruz | cara |
| cruz | cara | cruz |
| cruz | cara | cara |
| cara | cara | cara |
| cara | cara | cruz |
| cara | cruz | cara |
| cara | cruz | cruz |

137 4 orchids, 7 tulips, 5 daffodils

| | | | |
|---------|--------|-----------|----|
| 10 | 30 | 60 | 90 |
| 9 | 27 | 54 | 81 |
| 8 | 24 | 48 | 72 |
| 7 | 21 | 42 | 63 |
| 6 | 18 | 36 | 54 |
| 5 | 15 | 30 | 45 |
| 4 | 12 | 24 | 36 |
| 3 | 9 | 18 | 27 |
| 2 | 6 | 12 | 18 |
| 1 | 3 | 6 | 9 |
| <hr/> | | | |
| Orchids | Tulips | Daffodils | |

137 4 orchids, 7 tulipanes, 5 narcisos

| | | | |
|-----------|-----------|----------|----|
| 10 | 30 | 60 | 90 |
| 9 | 27 | 54 | 81 |
| 8 | 24 | 48 | 72 |
| 7 | 21 | 42 | 63 |
| 6 | 18 | 36 | 54 |
| 5 | 15 | 30 | 45 |
| 4 | 12 | 24 | 36 |
| 3 | 9 | 18 | 27 |
| 2 | 6 | 12 | 18 |
| 1 | 3 | 6 | 9 |
| <hr/> | | | |
| Orquideas | Tulipanes | Narcisos | |

138 15 necklaces; 5 blue, 7 green, 3 red (Other solutions may be possible.)

| | | | | | | | | | | | | | | | | | | | | |
|-------|---|----|----|------|-------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 10 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| <hr/> | | | | Blue | Green | Red | | | | | | | | | | | | | | |

138 15 collares; 5 azules, 7 verdes, 3 rojos (Other solutions may be possible.)

| | | | | | | | | | | | | | | | | | | | | |
|-------|---|----|----|------|-------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 10 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| <hr/> | | | | Azul | Verde | Rojo | | | | | | | | | | | | | | |

139 Melissa—12, Abby—10, Kirk—17, Lee—9

| | | | | | | | | | | | | | | | | | | | | |
|-------|---|----|----|------|-------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 10 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| <hr/> | | | | Blue | Green | Red | | | | | | | | | | | | | | |

139 Melissa—12, Abby—10, Kirk—17, Lee—9

| | | | | | | | | | | | | | | | | | | | | |
|-------|---|----|----|------|-------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 10 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| <hr/> | | | | Azul | Verde | Rojo | | | | | | | | | | | | | | |

140 Ira—36, Hunter—24, Tasha—12, Nydia—48, Jay—60, Mandy—60

| | | | | | | | | | | | | | | | | | | | | |
|-------|---|----|----|------|-------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 10 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| <hr/> | | | | Blue | Green | Red | | | | | | | | | | | | | | |

140 Ira—36, Hunter—24, Tasha—12, Nydia—48, Jay—60, Mandy—60

| | | | | | | | | | | | | | | | | | | | | |
|-------|---|----|----|------|-------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 10 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| <hr/> | | | | Azul | Verde | Rojo | | | | | | | | | | | | | | |