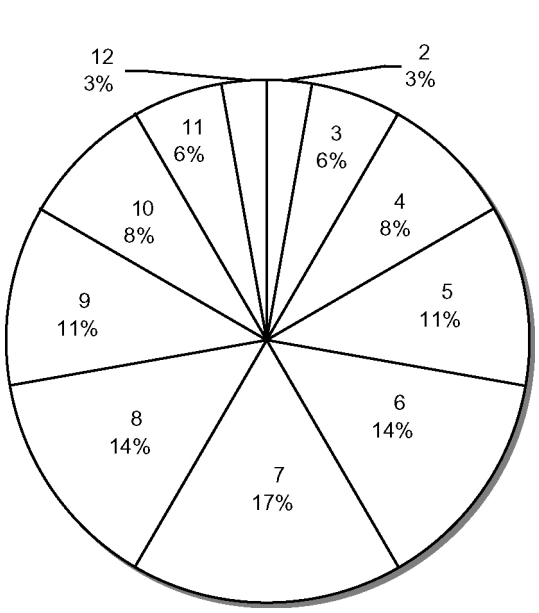
Chapter 8 Problems of the Week Answers

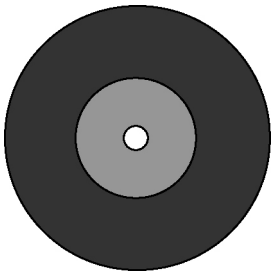
1. a)

Sum	Red Die	Green Die
2	1	1
3	1	2
	2	1
4	1	3
	2	2
	3	1
5	1	4
	2	3
	3	2
	4	1
6	1	5
	2	4
	3	3
	4	2
	5	1
7	1	6
	2	5
	3	4
	4	3
	5	2
	6	1
8	2	6
	3	5
	4	4
	5	3
	6	2
9	3	6
	4	5
	5	4
	6	3
10	4	6
	5	5
	6	4
11	5	6
	6	5
12	6	6

b) Circle graphs may vary. Example:



2. Diagrams will vary. Example:



b) The 1 km setting covers 3.14 km^2. The 5 km setting covers 78.5 km^2. The 10 km setting covers 314 km^2.

c) There is 100 times more power needed for the largest setting because 314 is 100 times 3.14.

3. a) Diagrams will vary. Each circle should be twice the radius of the previous one.

b) The radius must double.

c) Answers may vary. Example: When the radius of a circle doubles, its area quadruples.

4. a) 2 **b)** 16 cm

5. a) $\frac{1}{4}$ **b)** $\frac{1}{4}$

c) When the diameter is halved, the windmill generates $\frac{1}{4}$ the energy.

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