1. If white = 1, what value would you assign to all the other rods?

Students should determine that red = 2, light green = 3, purple = 4, yellow = 5, dark green = 6, black = 7, brown = 8, blue = 9, and orange = 10.

2. If red = 1, what value would you assign to all the other rods?

White = 1/2, light green = 1 1/2, purple = 2, yellow = 2 1/2, dark green = 3, black = 3 1/2, brown = 4, blue = 4 1/2, and orange = 5.

3. If light green = 1, what value would you assign to all the other rods?

White = 1/3, red = 2/3, purple = 1 1/3, yellow = 1 2/3, dark green = 2, black = 2 1/3, brown = 2 2/3, blue = 3, and orange = 3 1/3.

4. If purple = 1, what value would you assign to all the other rods?

White = 1/4, red = 2/4 or 1/2, light green = 3/4, yellow = 1 1/4, dark green = 1 2/4 or 1 1/2, black = 1 3/4, brown = 2, blue = 2 1/4, and orange = 2 2/4 or 2 1/2.

5. If yellow = 1, what value would you assign to all the other rods?

White = 1/5, red = 2/5, light green = 3/5, purple = 4/5, dark green =1 1/5, black = 1 2/5, brown = 1 3/5, blue = 1 4/5, and orange = 2.

6. If dark green = 1, what value would you assign to all the other rods?

White = 1/6, red = 2/6 or 1/3, light green = 3/6 or 1/2, purple = 4/6 or 2/3, yellow = 5/6, black = 1 1/6, brown = 1 2/6 or 1 1/3, blue = 1 3/6 or 1 1/2, and orange =1 4/6 or 1 2/3.

7. If black = 1, what value would you assign to all the other rods?

White = 1/7, red = 2/7, light green = 3/7, purple = 4/7, yellow = 5/7, dark green = 6/7, brown = 1 1/7, blue = 1 2/7, and orange =1 3/7.

8. If brown = 1, what value would you assign to all the other rods?

White = 1/8, red = 2/8 or 1/4, light green = 3/8, purple = 4/8 or 1/2, yellow = 5/8, dark green = 6/8 or 3/4, black = 7/8, blue = 1 1/8, and orange =1 2/8 or 1 1/4.

9. If blue = 1, what value would you assign to all the other rods?

White = 1/9, red = 2/9, light green = 3/9 or 1/3, purple = 4/9, yellow = 5/9, dark green = 6/9 or 2/3, black = 7/9, brown = 8/9, and orange =1 1/9.

10. If orange = 1, what value would you assign to all the other rods?

White =1/10, red = 2/10 or 1/5, light green = 3/10, purple = 4/10 or 2/5, yellow = 5/10 or 1/2, dark green = 6/10 or 3/5, black = 7/10, brown = 8/10 or 4/5, and blue = 9/10.