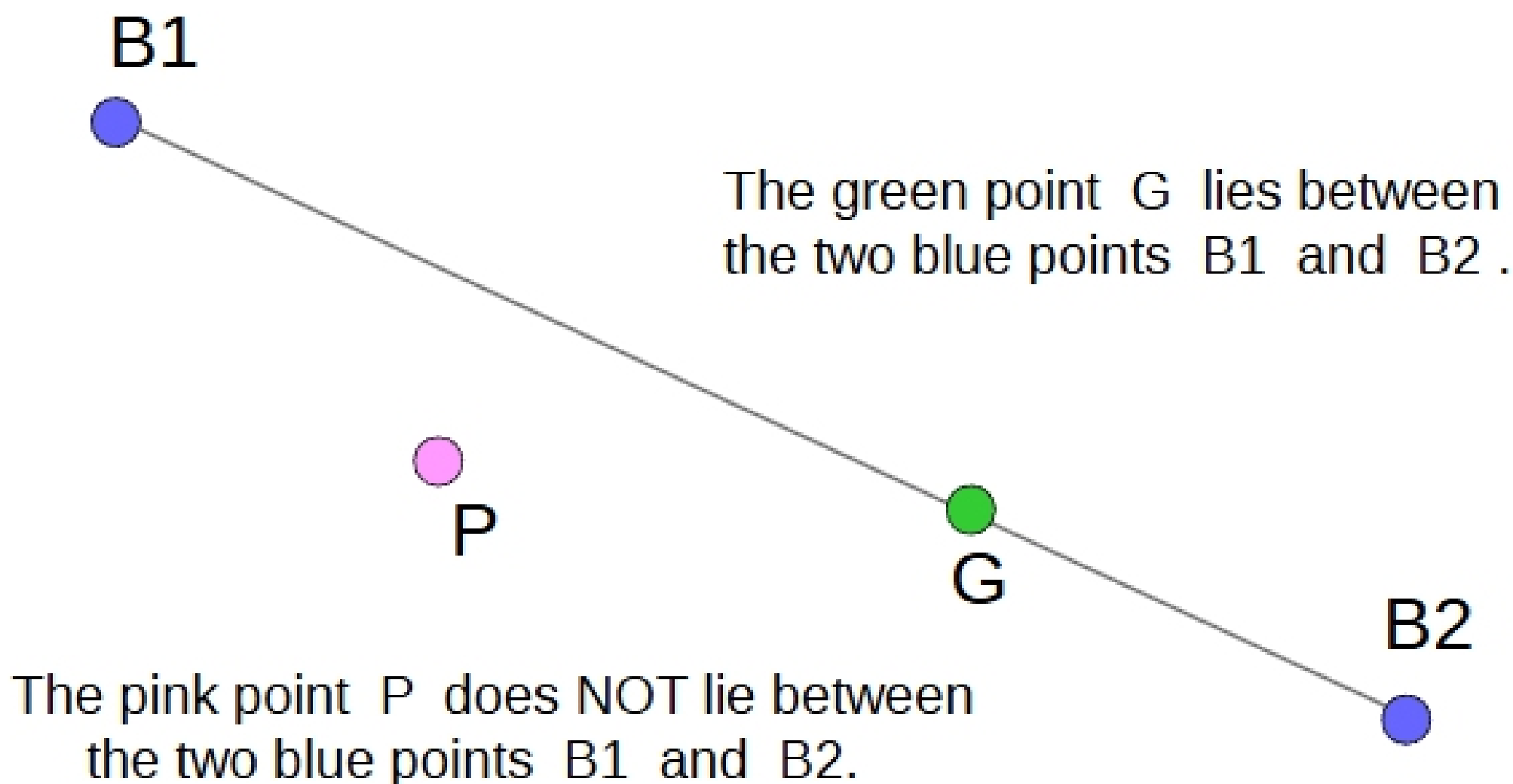


Linear Interpolation

Applying “weighted averages” to
some graphics problems:
animations and curve-drawing

What does 'between' mean?



Using a “weighted average”

- Suppose (x_1, y_1) and (x_2, y_2) are points
- The point located half-way in-between is:
midpoint = $(\frac{1}{2})(x_1, y_1) + (\frac{1}{2})(x_2, y_2)$
- It's the “average” of (x_1, y_1) and (x_2, y_2)
- Here's another point on the line-segment that lies between (x_1, y_1) and (x_2, y_2) :
 $(x', y') = (\frac{1}{4})(x_1, y_1) + (\frac{3}{4})(x_2, y_2)$
- It's a “weighted average” of the endpoints