

Floodlights



Eliot is playing football.

He is 6 feet tall.

He stands exactly half way between two floodlights.

The floodlights are 12 yards high and 50 yards apart.

The floodlights give Eliot two shadows, falling in opposite directions.

1. Draw a diagram to represent this situation.

Label your diagram with the measures.

2. Find the total length of Eliot's shadows.

Explain your reasoning in detail.

3. Suppose Eliot walks in a straight line towards one of the floodlights.

Figure out what happens to the total length of Eliot's shadows.

Explain your reasoning in detail.