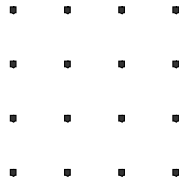Student Name: _____

1. How many different areas of <u>squares</u> can be made by choosing 4 of the 16 dots below as vertices?

   ▪ ▪ ▪ ▪

   ▪ ▪ ▪ ▪

   ▪ ▪ ▪ ▪

   ▪ ▪ ▪ ▪

   Answer: _____

2. How many of the following fractions get bigger after 1 is added to the numerator and also to the denominator?

   $$\frac{4}{9} \qquad \frac{5}{2} \qquad \frac{3}{2} \qquad \frac{4}{7} \qquad \frac{8}{9} \qquad \frac{6}{8}$$
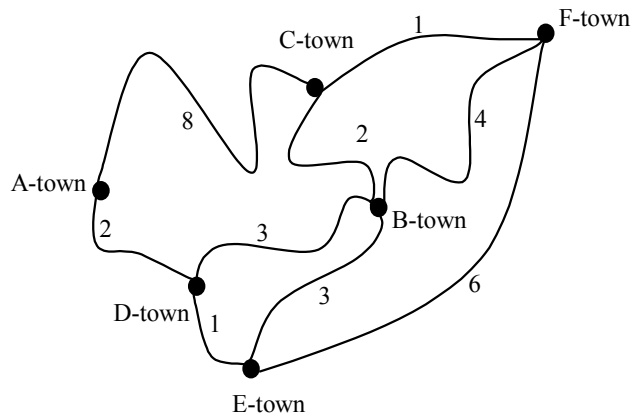
   Answer: _____

3. The distance that Helen drives in 45 minutes is 3 times the distance that John drives in 30 minutes. If Helen drives at 100 km/h, how fast does John drive in km/h?
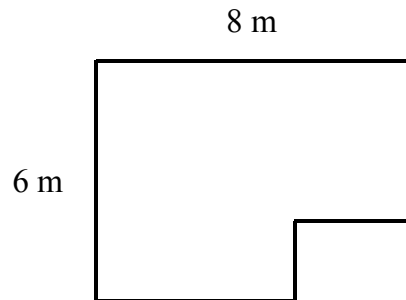
   Answer: _____

Student Name: _____

4. Various cities and the distances between them are shown on the map below. Using only the paths on the map, what is the shortest distance between A-Town and F-Town? (The diagram is not drawn to scale.)
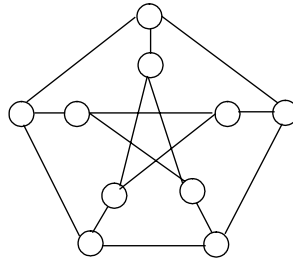

Answer: _____

5. What is the perimeter of the shape below?
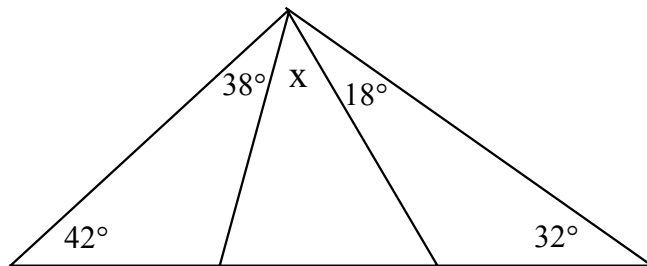

Answer: _____

Student Name: _____

6. In the diagram below, we want to shade some circles. What is the maximum number of circles we can shade such that no two shaded circles are connected by a line?

Answer: _____

7. In the figure below, what is the angle x?

38° x 18°

42°   32°

Answer: _____

8. There are two analog 12-hour watches. One watch runs 3 minutes faster each day, and the other watch runs 2 minutes more slowly each day. If they currently tell the same time, how many days will pass before they tell the same time again?

Answer: _____