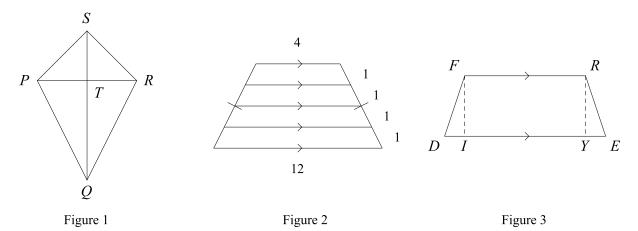
## Handout 3: Let's Go Fly A Kite



- 1. Can a trapezoid's bases ever be congruent? Why or why not?
- 2. How are a kite's diagonals related?
- 3. Can opposite sides of a kite be congruent? Why or why not?

For problems 4-6, refer to the kite in Figure 1.

- 4. If SQ = 11 m, PR = 6 m, and SR = 5 m, what is the length of  $\overline{PQ}$ ?
- 5. If  $m \angle PSQ = 50^{\circ}$  and  $m \angle PQS = 45^{\circ}$ , what is the measure of  $m \angle SRQ$ ?
- 6. If  $m \angle PQR = 76^{\circ}$ , what is the measure of  $m \angle PRQ$ ?

Use Figure 2 for questions 7-8.

- 7. What is the value of y?
- 8. What are the values of *x* and *z*?

Use Figure 3 for questions 9-10.

- 9. If  $m \angle D = 73^{\circ}$  and  $m \angle E = 51^{\circ}$ , what are the measures of  $\angle R$  and  $\angle F$ ?
- 10. If FR = 7 km, DE = 13 km, YE = 3 km, and the height of the trapezoid is 4 km, what is its perimeter?

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