**Activity Vector Geometry**

1. ABCD is a parallelogram. = p and = q. S is the Midpoint of AC. Find in terms of p and q.

B C

S

A D

1. and .
2. Write as a column vector
3. Write two statements about the relationship between the lines OP and QR
4. OMPQ is a rectangle and O is the origin. and . T is on OP so that OT : TP = 3 : 1. Find the following vectors in terms of a and b in their simplest form.
5. M P
7. T

O Q

**Answer key**

1. O.5q – 0.5p

* QR is twice as long as OP
* QR and OP have the same direction and therefore are parallel

1. a) a + b

b) 0.75b – 0.25a

c) 0.75a - 0.25b