**6.2 Slopes of Parallel and Perpendicular Lines**

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| PQ and MN are parallelFind the slope of each linemPQ = mMN =  |  |

PARALLEL LINES HAVE EQUAL SLOPE

perpendicular – meeting at a right angle

|  |  |
| --- | --- |
| AB and BC are perpendicularFind the slope of each linemAB = mBC =  |  |

PERPENDICULAR LINES HAVE SLOPES

THAT ARE NEGATIVE RECIPROCALS

eg slope = perpendicular slope =

 slope = perpendicular slope =

 slope = perpendicular slope =

ex1.a) Line ST passes through S(-2,7) T(2,-5). Line UV passes through U(-2,3) V(7,6).

Are these lines parallel, perpendicular or neither?

(b) Line N(-6,2) P(-3,-4) and Line Q(1,-3) R(3,4). Are these lines parallel, perpendicular or neither?

ex.2a) The following are slopes of parallel lines: $-\frac{2}{3} , -\frac{n}{9}$ Find the value of n.

b) The following are slopes of perpendicular lines $\frac{4}{t} , \frac{9}{2}$ Find the value of t.

**Homework**