Gradients: Fold Mountains

NAME: ....

CLASS: ....

DATE: ....
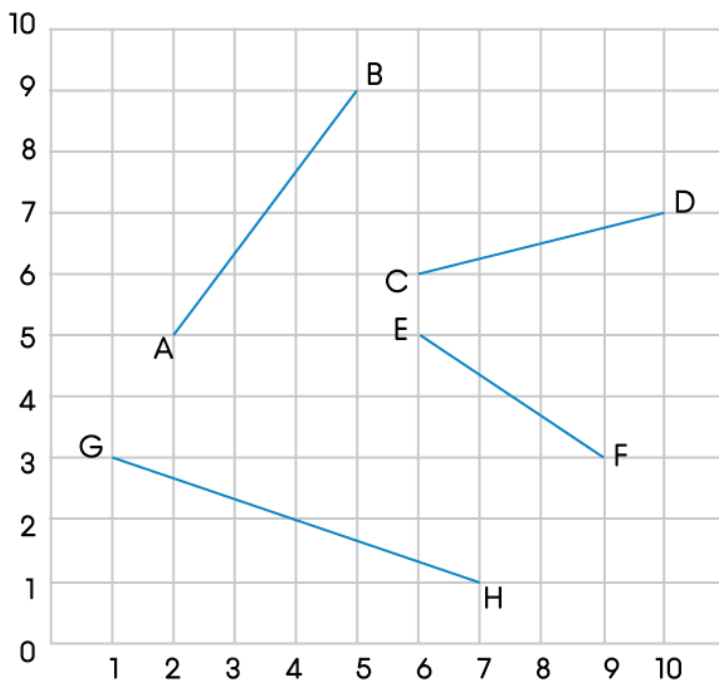
Basic

1) Plot each of the following sets of points and calculate the gradient of the line passing through each set.

a) (1,1) (2,2) (3,3)   b) (0,2) (2,3) (6,5)   c) (0,0) (1,4) (2,8)

2) Find the gradients of the lines AB, CD, EF and GH below. Give your answers as both a fraction and a decimal to two decimal places.
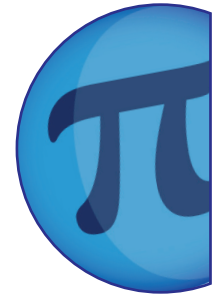
Gradients: Fold Mountains

Twig

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Core

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1) Plot the following pairs of points and join them up to form a straight line. Calculate the gradient of the straight line.
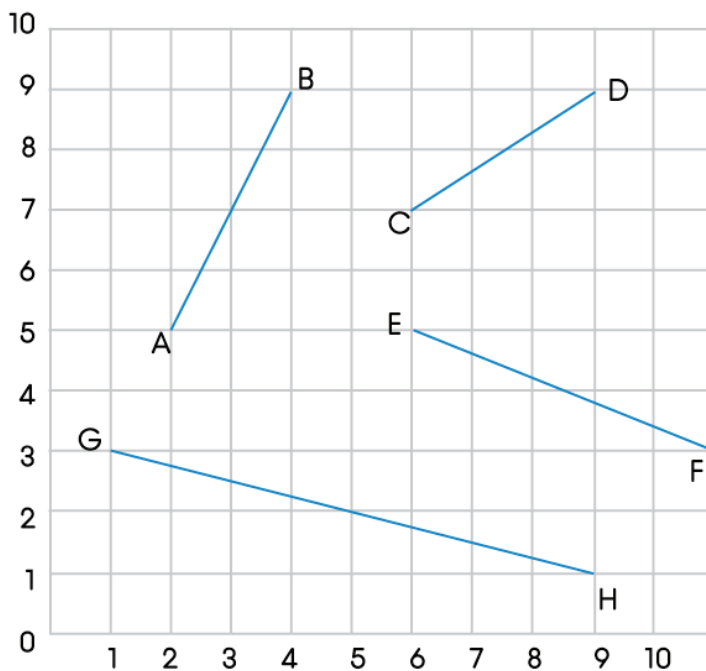
a) (-2,1) (1,4) b) (-4,2) (6,4) c) (-1,-2) (2,4) d) (-4,-3) (5,0)

2) Find the gradients of the lines AB, CD, EF and GH below. Give your answers as both a fraction and a decimal to two decimal places.

3) What letter is used to represent the gradient?
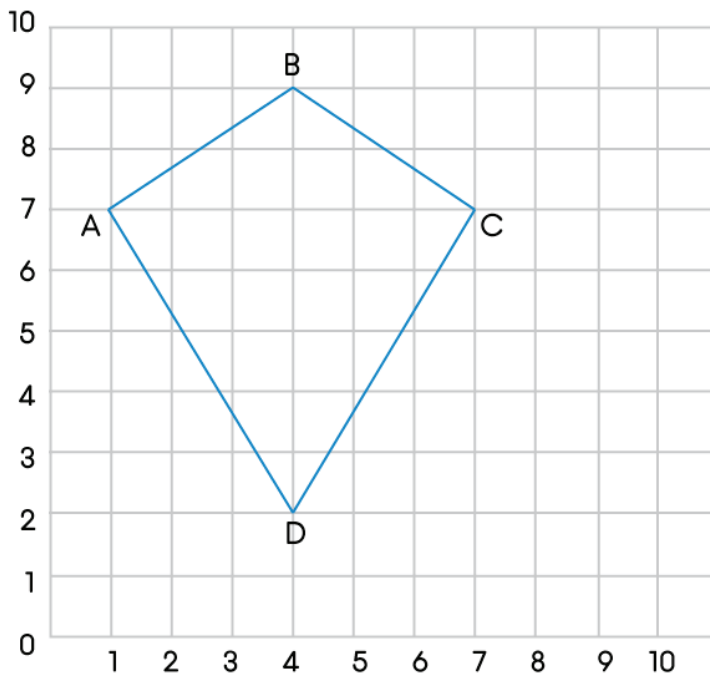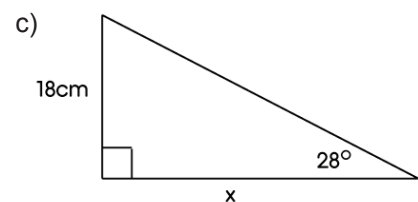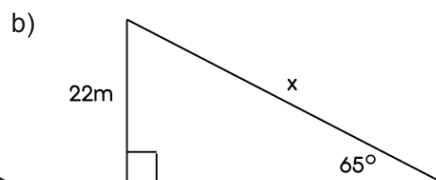
Gradients: Fold Mountains

NAME: ....

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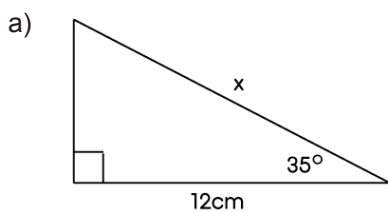
DATE: ....

Advanced

1) Find the gradients of the lines AB, BC, AD and DC.

2) Find the length of the sides marked x in each of the following:

a)

b)

c)

ANSWERS

Basic

1) a) gradient = 1   b) gradient = 0.5   c) gradient = 4

2) AB = $\frac{4}{3}$, 1.33;   CD = $\frac{1}{4}$, 0.25;   EF = $-\frac{2}{3}$, -0.67;   GH = $-\frac{1}{3}$, 0.33

Core

1) a) gradient = 1   b) gradient = 0.2   c) gradient = 2   d) gradient = 0.33

2) AB = $\frac{2}{1}$, 2;   CD = $\frac{2}{3}$, 0.67;   EF = $-\frac{2}{5}$, -0.4;   GH = $-\frac{1}{4}$, -0.25

3) m

Advanced

1) $m_{AB} = \frac{2}{3}$; $m_{BC} = -\frac{2}{3}$; $m_{AD} = -\frac{5}{3}$; $m_{DC} = \frac{5}{3}$

2) a) x = 14.6cm   b) x = 24.3m   c) x = 33.9cm