

National 4 Mathematics: Homework 5

§ 1 Gradient

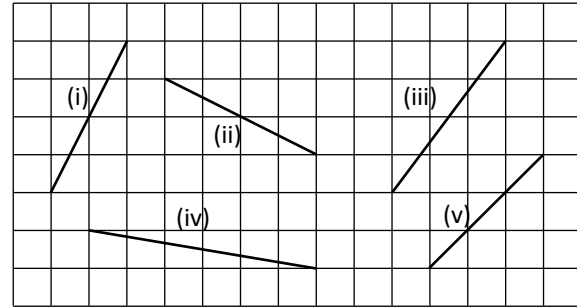
- 1 (a) Calculate the gradient of each line

in the diagram opposite.

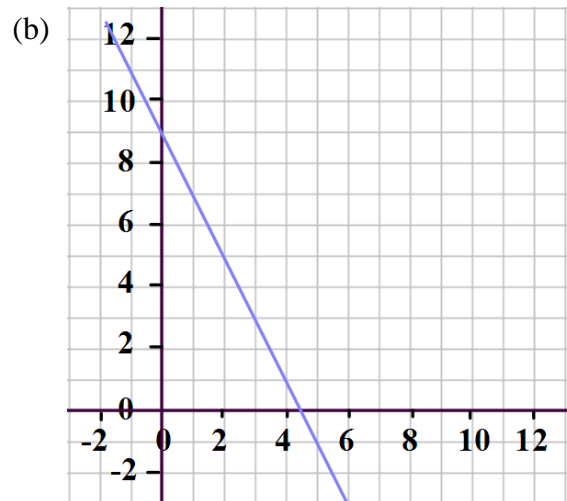
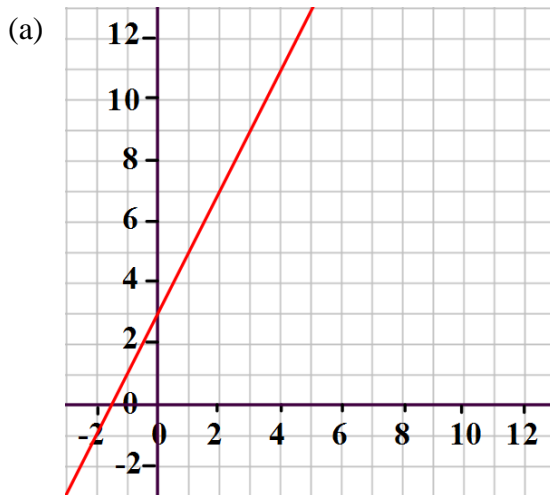
- (b) **Copy** and complete each statement below :

The gradient of any horizontal line is _____.

The gradient of any vertical line is _____.



- 2 Calculate the gradient of the following lines.

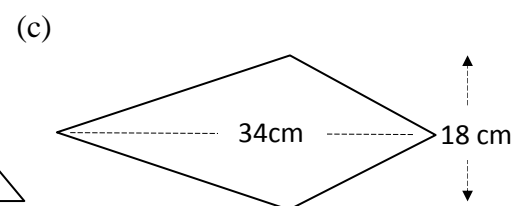
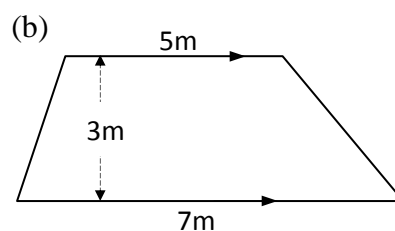
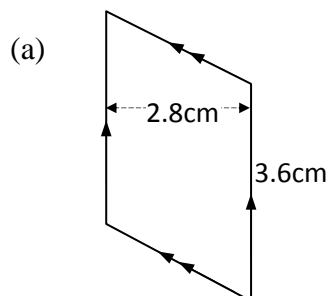


- 3 Calculate the gradient of the line joining each pair of points below.

- (a) A(4,3) , B(8,11) (b) C(1,9) , D(3,1) (c) E(-2,6) , F(8,8)

§ 2 Area of Quadrilaterals

- 1 Calculate the area of the following shapes



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§ 3 Mixed

- 1** A furniture firm reduces the prices of its sofas by 12%. Calculate the new price of the sofa if the original price was £499.

- 2** M1 Abrams is a US military tank with a top speed of 41.5 mph.
How long would it take the tank to cover a distance of three and a half miles?

- 3** At the driving range a golfer records how many metres he can strike the ball.

108	115	132	121	141	122	138	127	165	142
118	127	149	120	139	136	131	141	111	129
137	110	101	103	118	122	154	146	131	126

Draw an ordered stem-and-leaf diagram to illustrate the data.
What is the median distance?

- 4** Find the mean, median, mode and range, Q_1 , Q_3 and SIQR of the following data set

12, 16, 17, 18, 31, 8, 15, 27, 11, 17

- 5** Bill has a brand new pack of cards and he removes the two jokers.

Bill asks Heather to pick a card from the pack.
What is the probability Heather will get a 7.

- 6** Simplify

(a) $-4 + 5$	(b) $-7 - (-6)$	(c) $13 + (-8)$
(d) $3a - (-3a)$	(e) $2x - 6x$	(f) $6c - 2c + (-4c)$

- 7** After a sales discount, 5 bottles of wine cost £86.25. What is the sale price of one bottle? (Round your answer to the nearest penny).