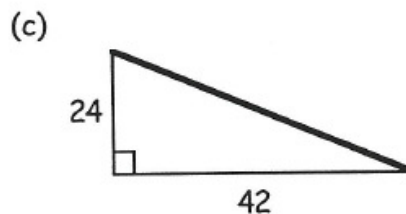
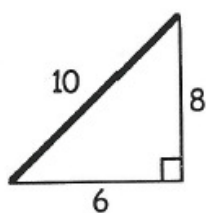
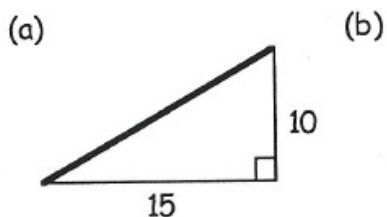


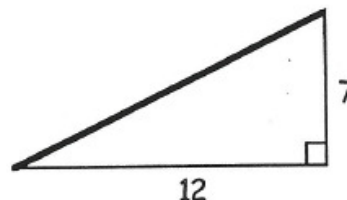


1. Write down the gradients of each of these lines :- (simplify your fractions)

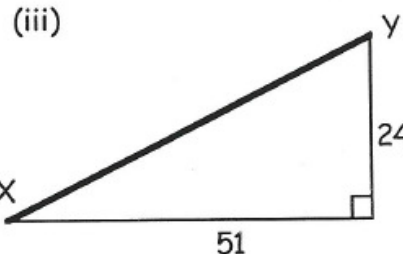
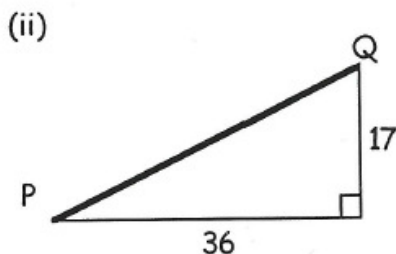
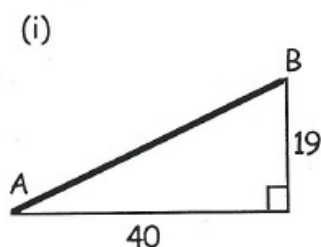


The gradient of this line is given by

$$\text{gradient} = \frac{7}{12} = 7 \div 12 = 0.5833\dots$$



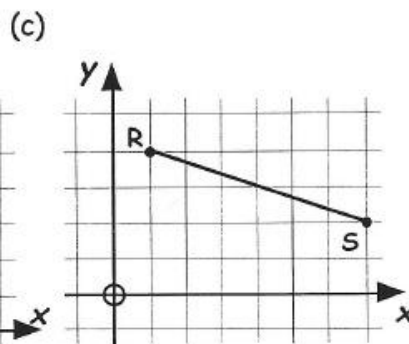
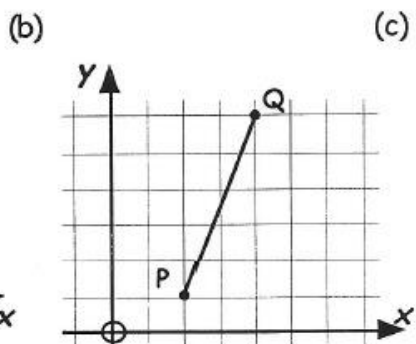
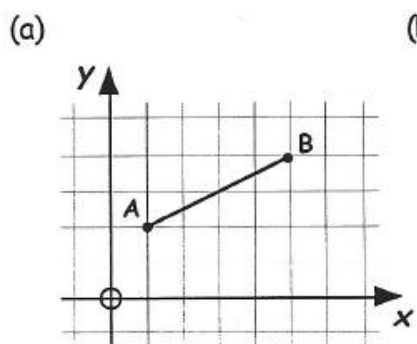
2. (a) Find the gradients of these three lines :-
(Give them as decimals correct to 3 decimal places)



3. The gradient of the line AB can be represented by the letter m.

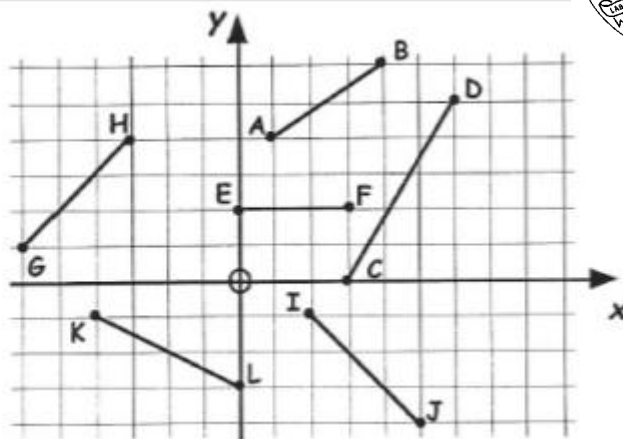
$$m_{AB} = \frac{y\text{-difference}}{x\text{-difference}} = \frac{\text{vertical}}{\text{horizontal}}$$

Use the formula to calculate the gradients of these lines.
(Remember - lines sloping "downwards" have a negative gradient).

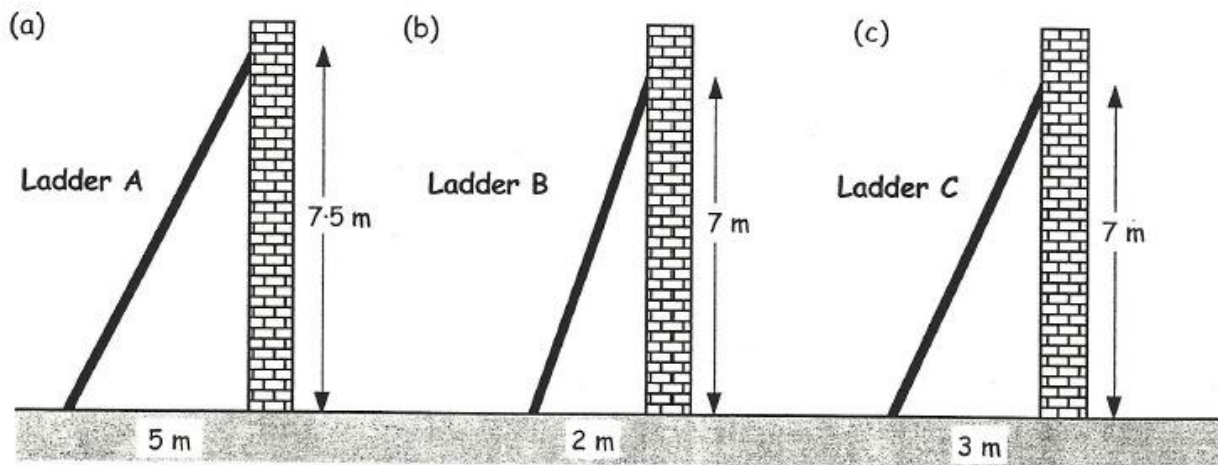




4. Calculate the gradient of each of the lines shown.
[remember the negative sign where required].



5. Find the gradient of each of these ladders:



A ladder is "SAFE" if it has a gradient with a value between 3 and 4.
Which of the above three ladders is safe and which is unsafe ?

6. Plot the 4 points $A(1,3)$, $B(4,4)$, $P(2,0)$, $Q(8,2)$ on a coordinate diagram.
Join A to B and P to Q .
- Calculate the gradient of line AB . (leave as a fraction)
 - Calculate the gradient of line PQ . (simplify your fraction)
 - What can you now say about the 2 lines AB and PQ ?