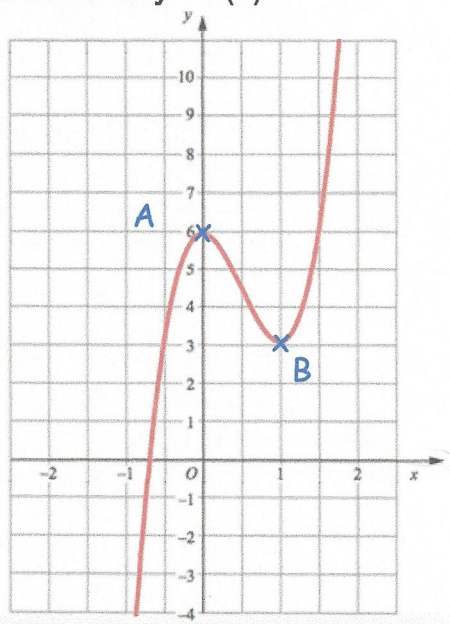
Name: _____ 5-a-day Higher Plus

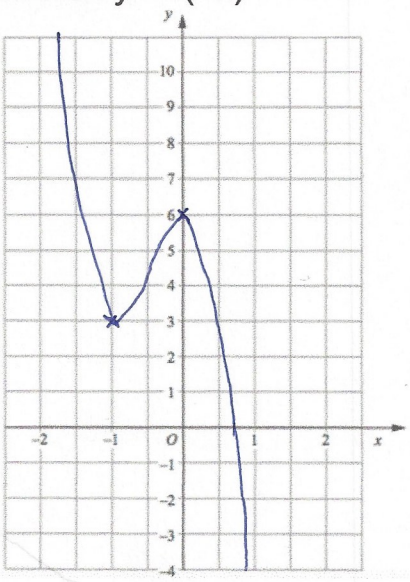
19th February

Corbettmaths

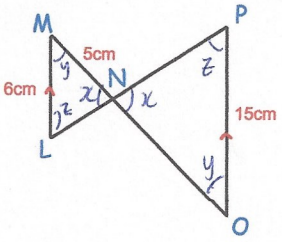
Shown is y = f(x)



Sketch y = f(–x)



Not drawn accurately



Explain why triangles LMN and NOP are similar

$\angle MNL = \angle PNO$ vertically opposite

$\angle LMN = \angle NOP$ alternate angles

$\angle OPN = \angle MLN$ alternate angles

There are 10 socks in a draw.
5 are white
3 are black
2 are red

$P(WW) = \frac{5}{10} \times \frac{4}{9} = \frac{20}{90}$

Heather takes two socks at random from the drawer.

$P(BB) = \frac{3}{10} \times \frac{2}{9} = \frac{6}{90}$

Work out the probability that Heather has picked 2 socks of the same colour.

$P(RR) = \frac{2}{10} \times \frac{1}{9} = \frac{2}{90}$

$P(2 \text{ same}) = \frac{20}{90} + \frac{6}{90} + \frac{2}{90} = \frac{28}{90} = \frac{14}{45}$

$f(x) = 3x - 1$

$g(x) = x^2 + 8$

Find

$fg(x) = 3(x^2 + 8) - 1$

$= 3x^2 + 24 - 1$

$= 3x^2 + 23$