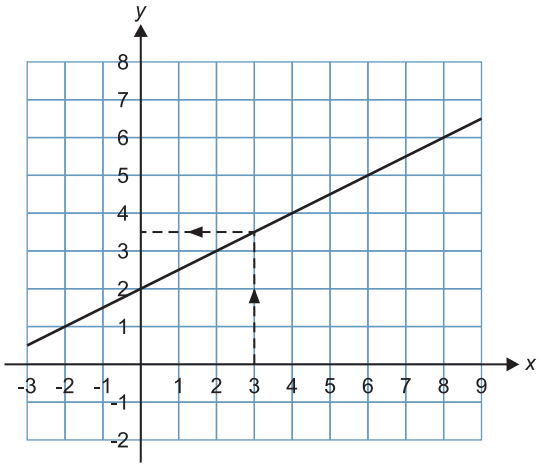
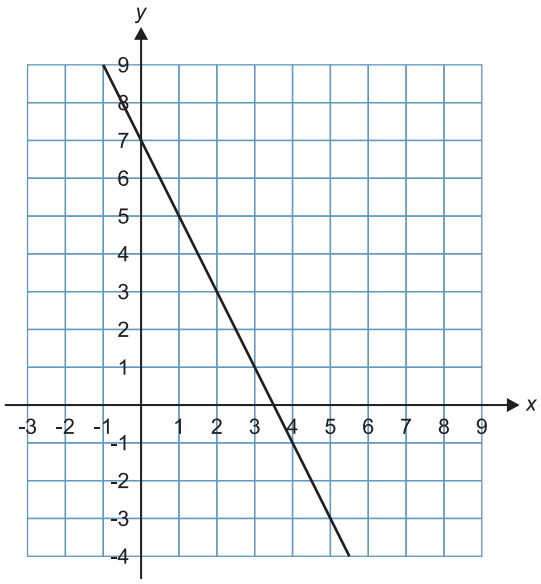
Testopgaver i lineære funktioner

Erik Vestergaard

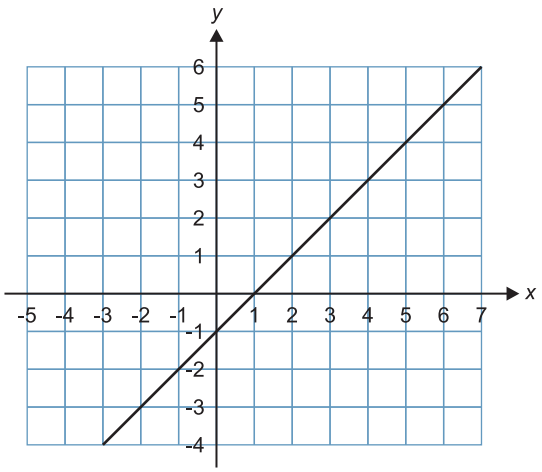
Aflæs funktionsværdier



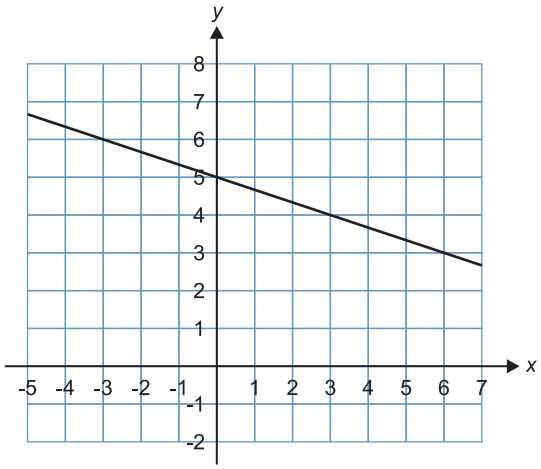
$f(3) = 3{,}5$



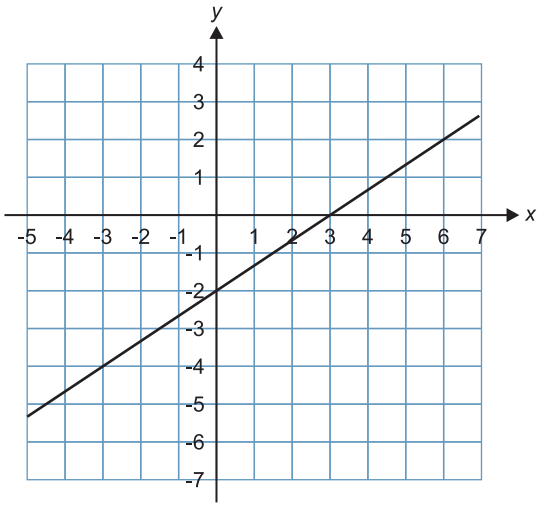
$f(2) =$ ☐



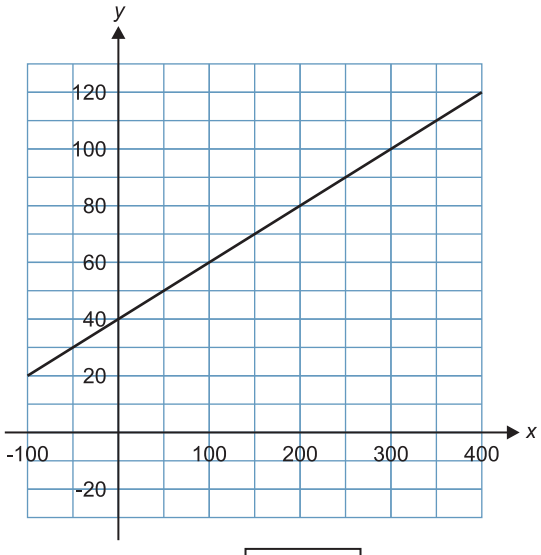
$f(-2) =$ ☐



$f(-2) =$ ☐

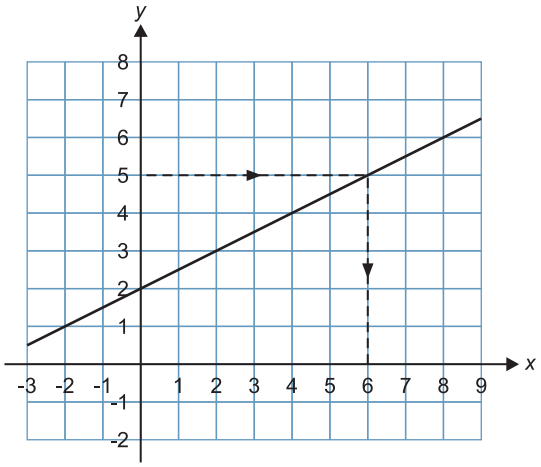


$f(0) =$ ☐

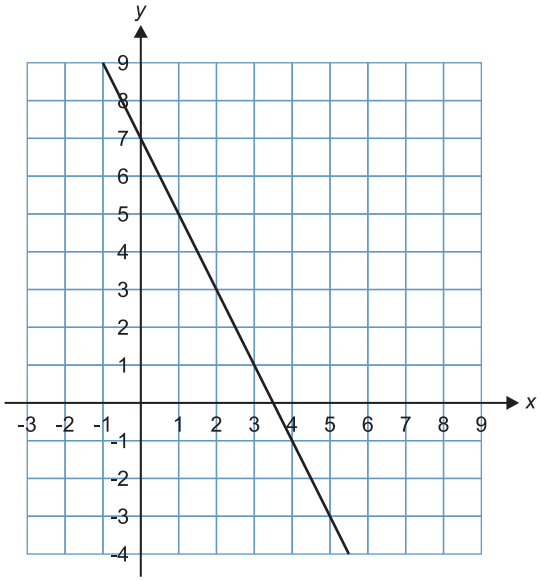


$f(150) =$ ☐

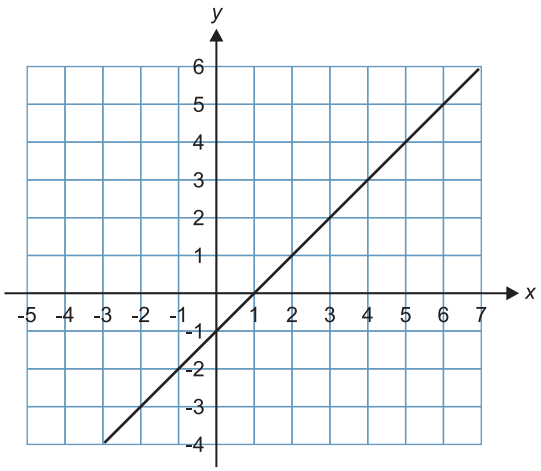
Løs ligninger grafisk



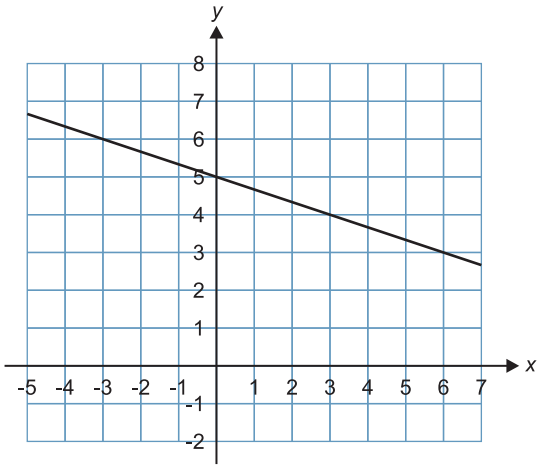
$f(x) = 5 \Leftrightarrow x = 6$



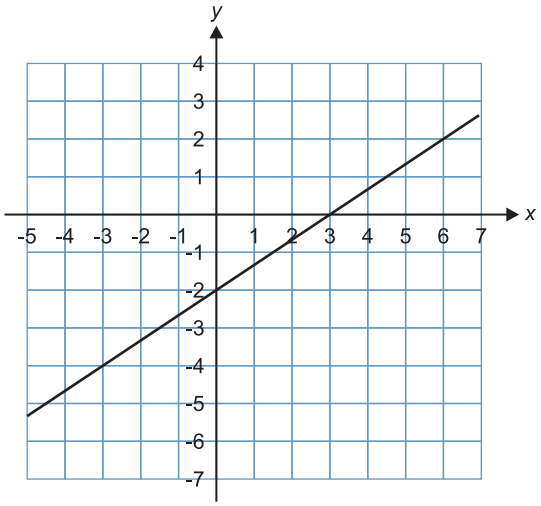
$f(x) = 4 \Leftrightarrow x =$ ☐



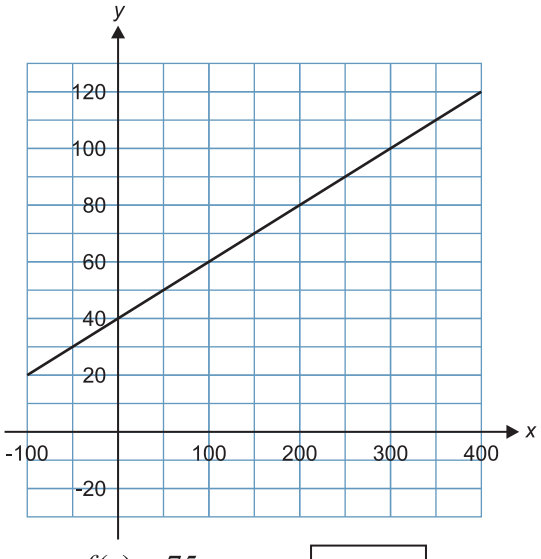
$f(x) = -2 \Leftrightarrow x =$ ☐



$f(x) = 6 \Leftrightarrow x =$ ☐

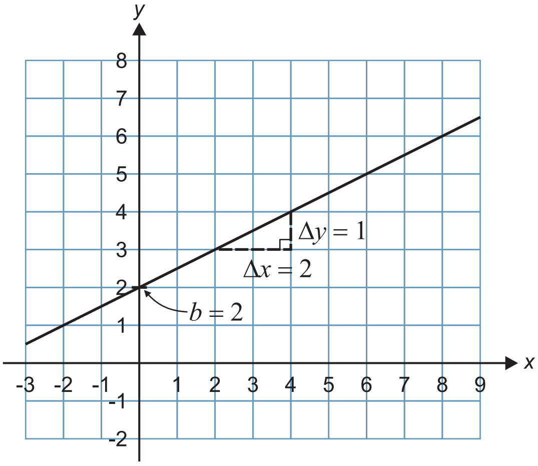


$f(x) = 1 \Leftrightarrow x =$ ☐



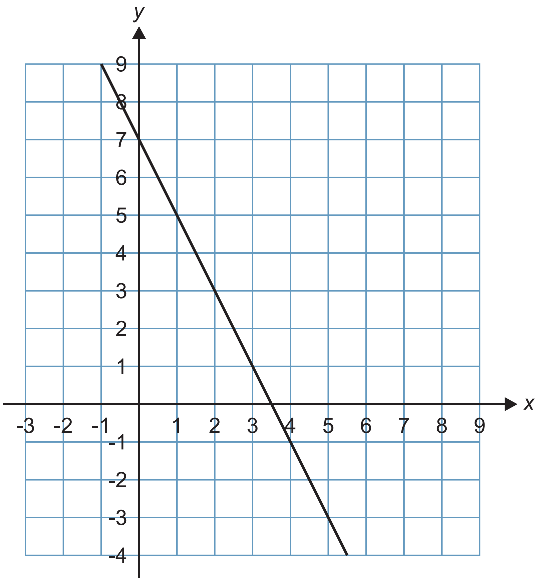
$f(x) = 75 \Leftrightarrow x =$ ☐

Bestem forskriften

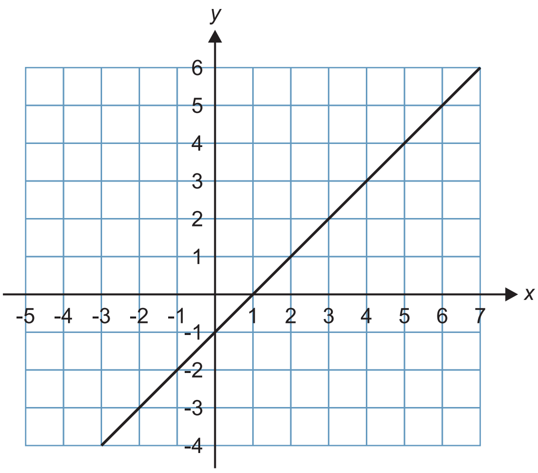


$$a = \frac{\Delta y}{\Delta x} = \frac{1}{2} = 0{,}5 \qquad b = 2$$

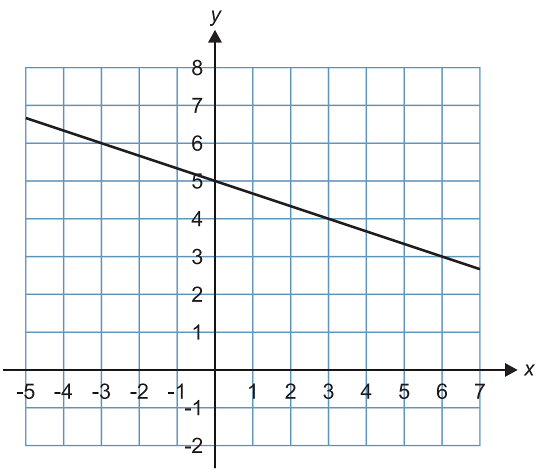
så $y = 0{,}5x + 2$



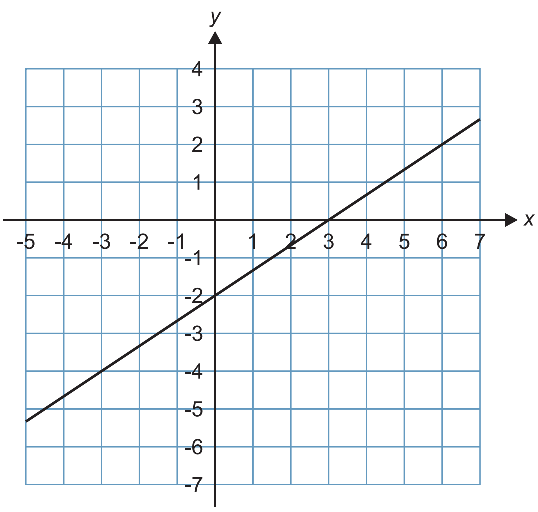
$a =$ ____ $b =$ ____ $y =$ ________



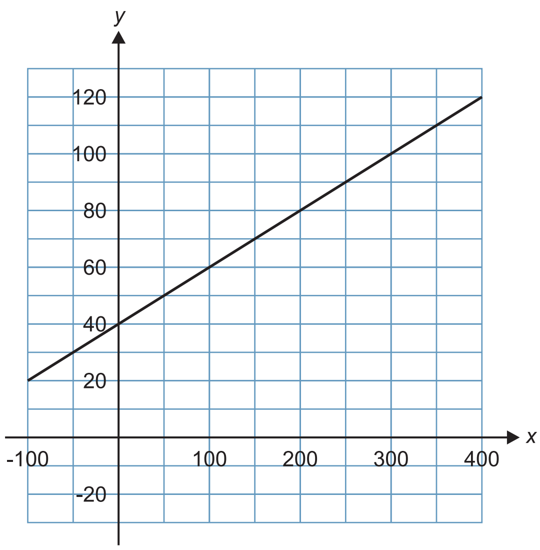
$a =$ ____ $b =$ ____ $y =$ ________



$a =$ ____ $b =$ ____ $y =$ ________

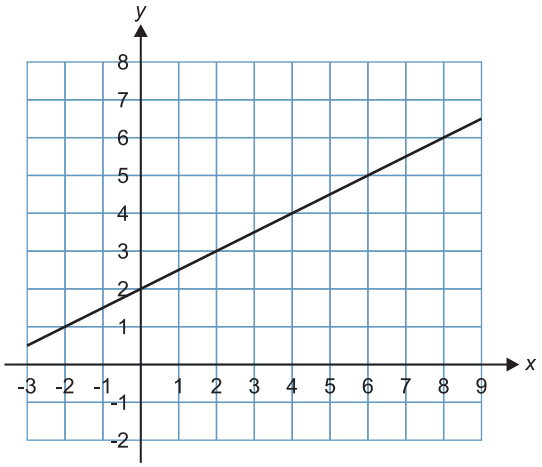


$a =$ ____ $b =$ ____ $y =$ ________



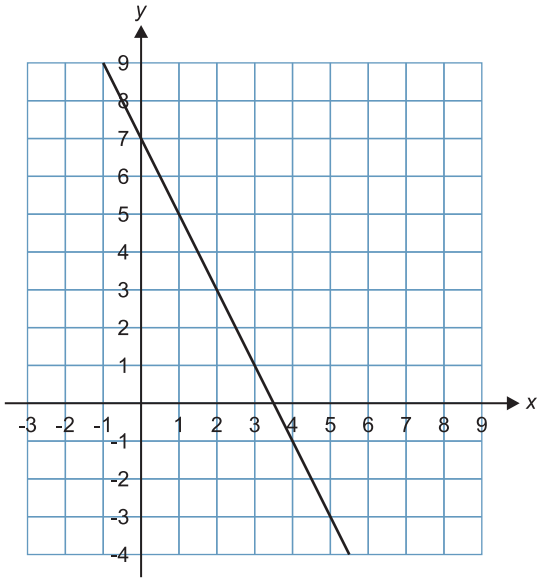
$a =$ ____ $b =$ ____ $y =$ ________

Beregn funktionsværdier udfra forskrift (se forrige side)

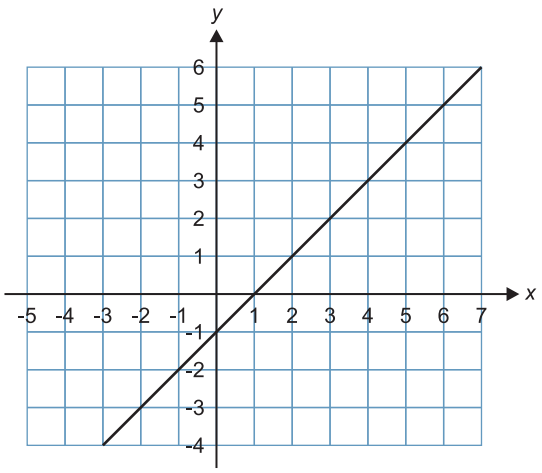


Forskrift: $f(x) = 0{,}5x + 2$

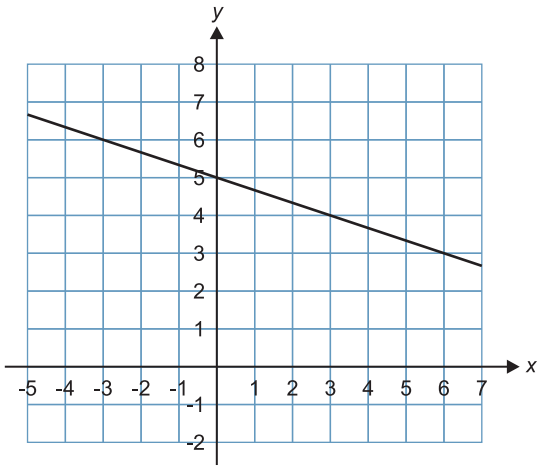
$f(6{,}2) = 0{,}5 \cdot 6{,}2 + 2 = 5{,}1$



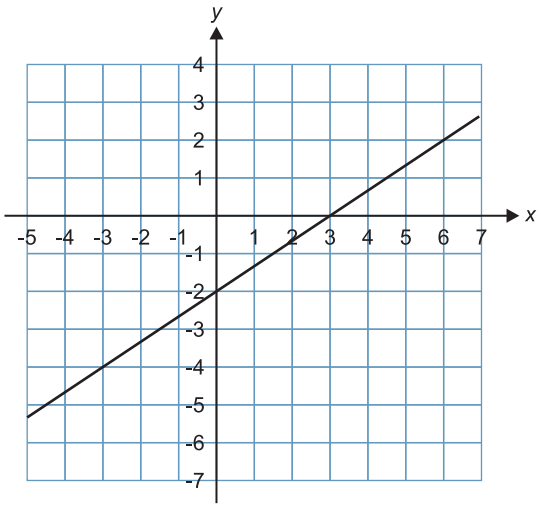
$f(2) =$ ☐ Får du det samme som på side 3?



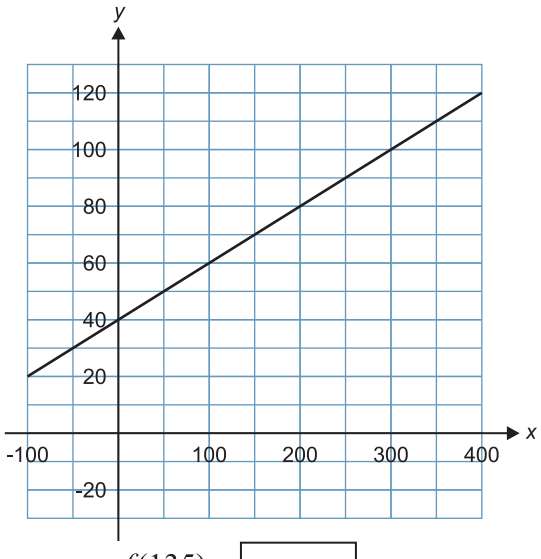
$f(2{,}4) =$ ☐



$f(-2) =$ ☐

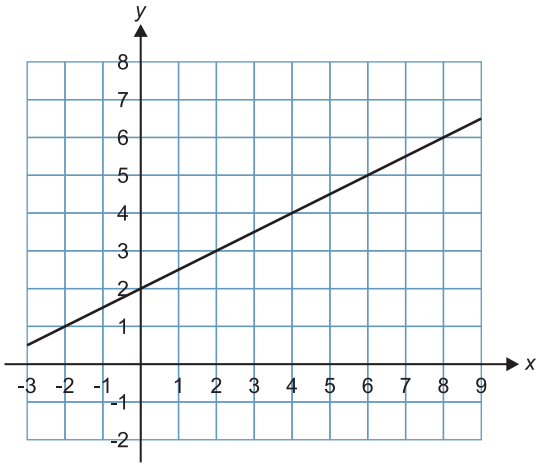


$f(2{,}4) =$ ☐



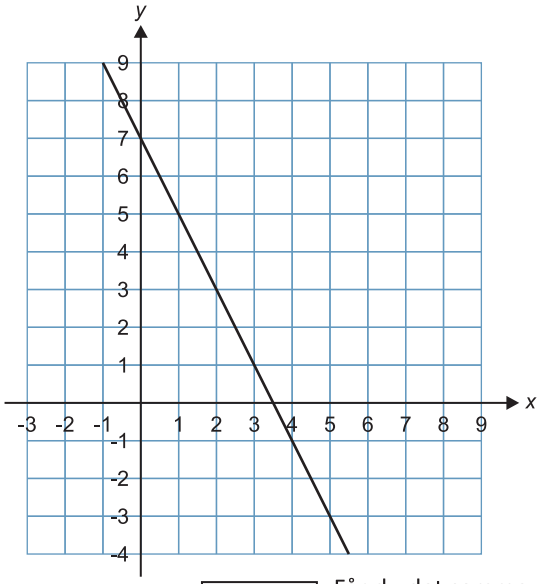
$f(135) =$ ☐

Løs ligninger ved beregning (brug forskrift)

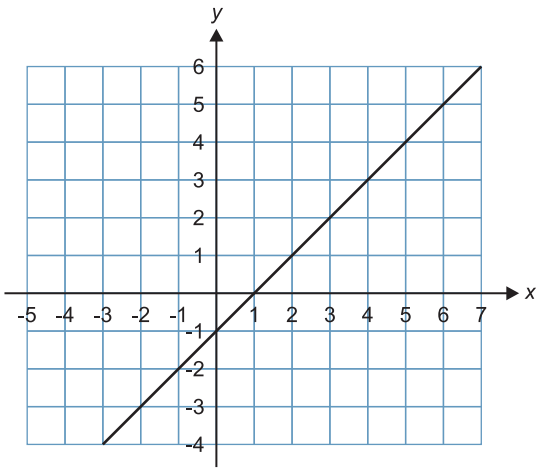


Forskrift: $f(x) = 0{,}5x + 2$

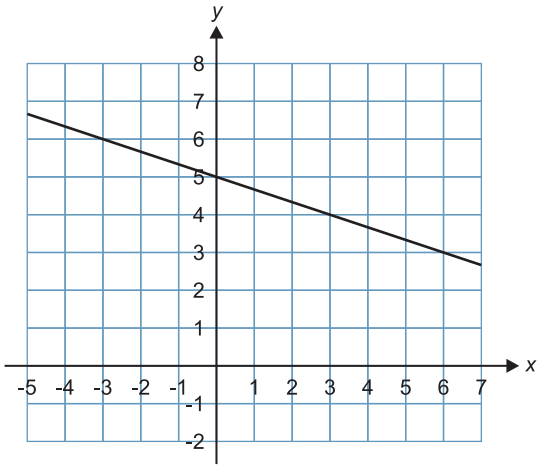
$f(x) = 3{,}2 \Leftrightarrow$
$0{,}5x + 2 = 3{,}2 \Leftrightarrow$
$0{,}5x = 1{,}2 \Leftrightarrow$
$x = 1{,}2/0{,}5 = 2{,}4$



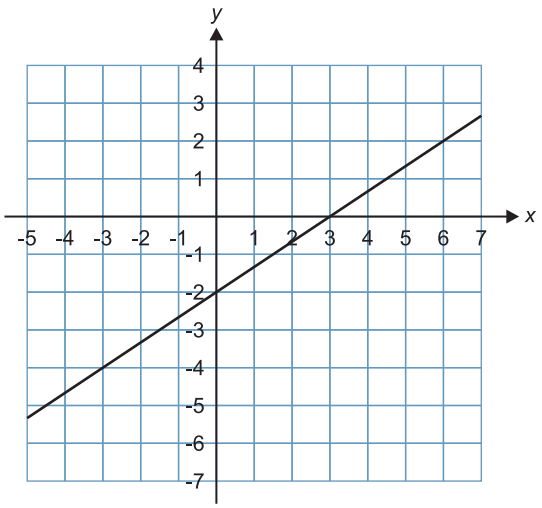
$f(x) = 4 \Leftrightarrow x =$ ☐ Får du det samme som på side 4?



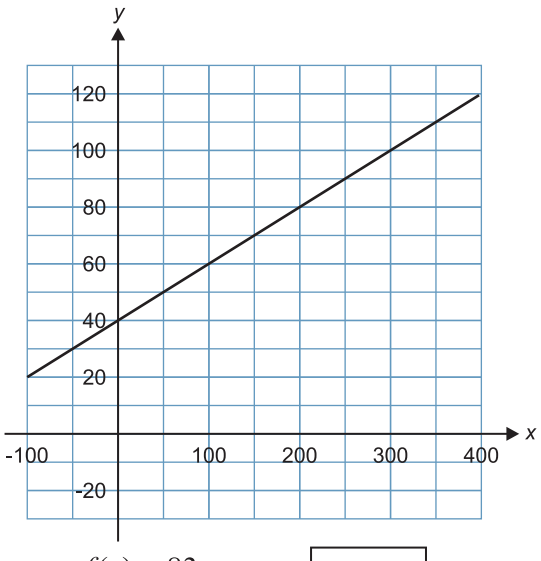
$f(x) = -1 \Leftrightarrow x =$ ☐



$f(x) = 3{,}5 \Leftrightarrow x =$ ☐

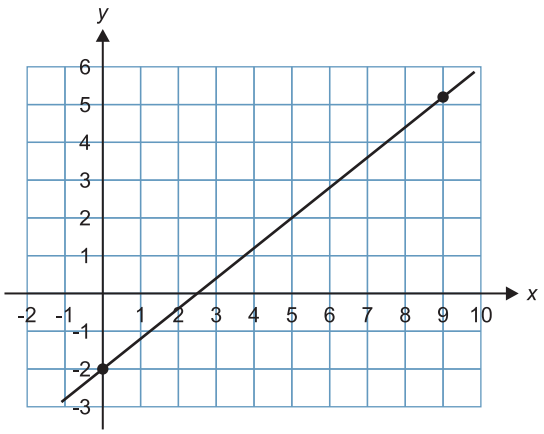


$f(x) = 3 \Leftrightarrow x =$ ☐



$f(x) = 83 \Leftrightarrow x =$ ☐

Tegne grafen for en lineær funktion ud fra forskriften

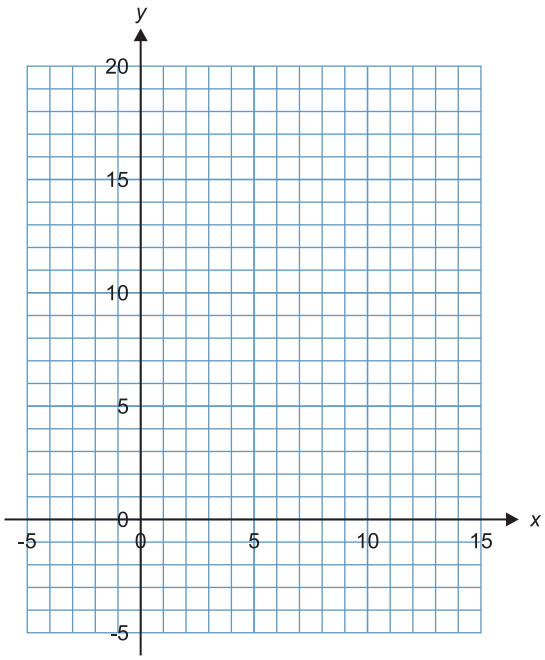


Forskrift: $f(x) = 0{,}8x - 2$

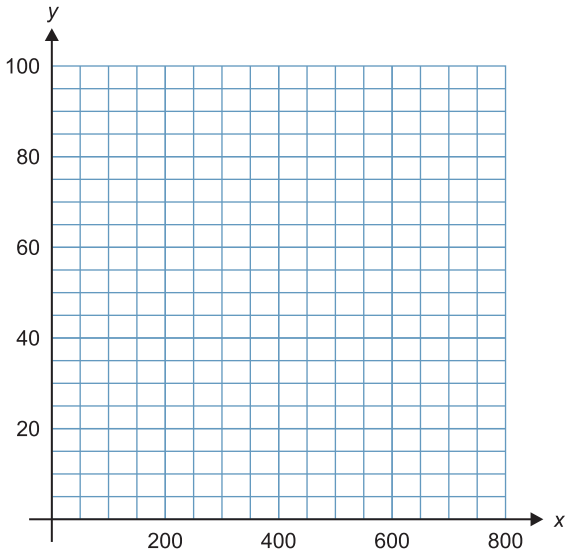
Da grafen er en linje er det nok
at udregne to støttepunkter på grafen:

$f(0) = 0{,}8 \cdot 0 - 0 = -2$ Punkt: $(0;-2)$

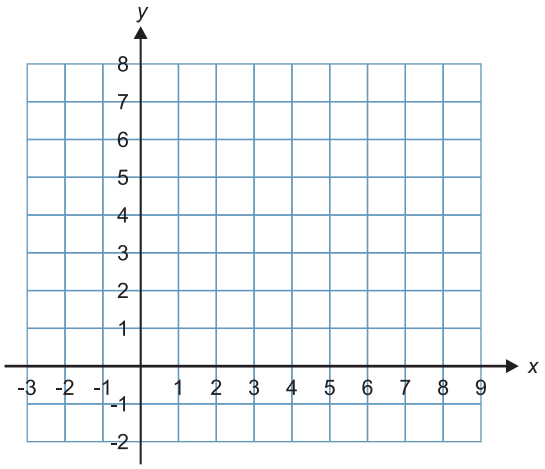
$f(9) = 0{,}8 \cdot 9 - 2 = 5{,}2$ Punkt: $(9;5{,}2)$



Tegn grafen for $f(x) = 0{,}5x + 2$



Tegn grafen for $f(x) = 0{,}10x + 15$



Tegn grafen for $f(x) = -0{,}5x + 6{,}5$