Ch 4 Linear Relations and Ch 5 Polynomials

June 7, 2018 9:07 AM

Ch 4 Linear Relations

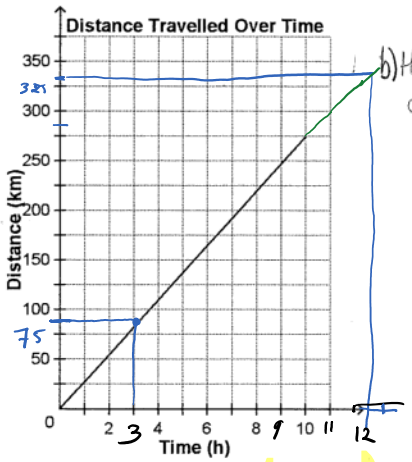
Interpolation vs. Extrapolation

Name: _____ **ID: A**

7. A car travels at a constant speed.
The graph shows how the distance of the car changes with time.

a) Estimate the time it takes to travel 330 km.

12 h 15 m or 12 1/4 h — extrapolation (we had to extend the graph)



b) How far does the car travel in 3 hours? about 87.5 km

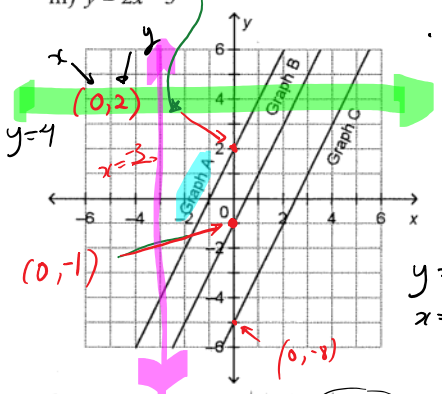
Interpolation ("in" or "on" the graph)

Final < 16 MC (no calculator)
6 long answer

(x, y)

8. a) Match each equation with a graph on the grid below.

i) $y = 2x - 1$
ii) $y = 2x + 2$
iii) $y = 2x - 5$



- Pick a point, (x,y) from a graph.
- Plug it into equation.
- If LHS = RHS (true), the point belongs to that line.

Try (0,2) in $y = 2x - 1$ (graph A)
$2 = 2(0) - 1$
$2 = -1$ False

in $y = 2x + 2$
$2 = 2(0) + 2$
$2 = 2$ TRUE!
∴ graph A is $y = 2x + 2$

Try (0,-1) $y = 2x - 1$
$-1 = 2(0) - 1$
$-1 = -1$ TRUE!
graph B

$y = 4$
$x = -3$

b) Explain How you know

horizontal lines have equation $y = ?$

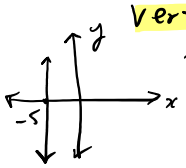
vertical lines have equation $x = ?$

c) Describe $x + 5 = 0$

$-5 \quad -5$

$x = -5$

Vertical line with x-intercept at $x = -5$



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Ch 5 Polynomials

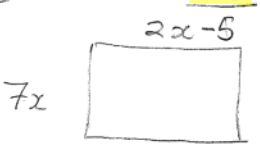
$x^1 \cdot x^1 = x^2$

1) $3x(-6x - 4)$

$3x(-6x) + 3x(-4)$

$-18x^2 - 12x$

2) Find the area



$7x(2x-5)$

	$2x$	-5
$7x$	$14x^2$	$-35x$

$14x^2 - 35x$

3) $(6x)(-7x)$

$-42x^2$

4) Find the perimeter of above rectangle.

add up sides!

$7x(2) + 2(2x-5)$

$= 14x + 4x - 10$

$= 18x - 10$

$7x$
$7x$
$2x - 5$
$2x - 5$

$18x - 10$

5) $(2x-5) - (8x + 7)$

Subtract means add the opposite

$2x - 5 + (-8x) + (-7)$

$-6x - 12$

6) $(5x^2 - 8x + 2) - (9x^2 - x - 4)$

$5x^2 - 8x + 2 + (-9x^2) + x + 4$

Collect

7) $\dfrac{-16x^2 + 24x - 8}{4}$

$\dfrac{-16x^2}{4} + \dfrac{24x}{4} - \dfrac{8}{4}$

$-4x^2 + 6x - 2$

8) $\dfrac{27x^2 - 9x}{3x}$

$\dfrac{x^2}{x} = x$

$\dfrac{27x^2}{3x} - \dfrac{9x}{3x}$

$9x - 3$

$27x^2 - 9x$

$3x$	$9x$	-3