Name: **Date:**

Practice: Comparing Linear Functions B

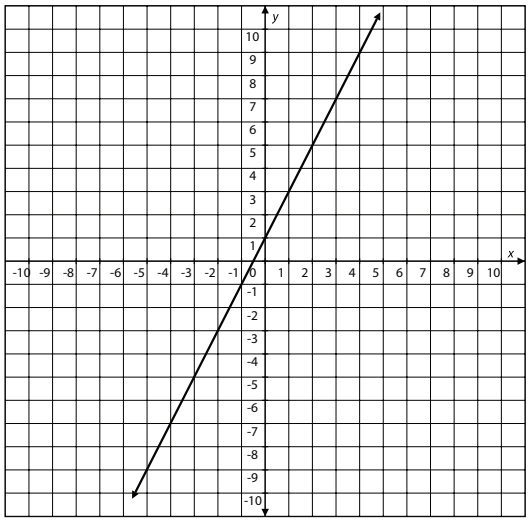
Compare the properties of the linear functions.

1. Which function has a greater rate of change? Which function has the greater *y*-intercept? Explain how you know.

Function A

x	$f(x)$
–3	–14
0	–5
2	1
5	10

Function B

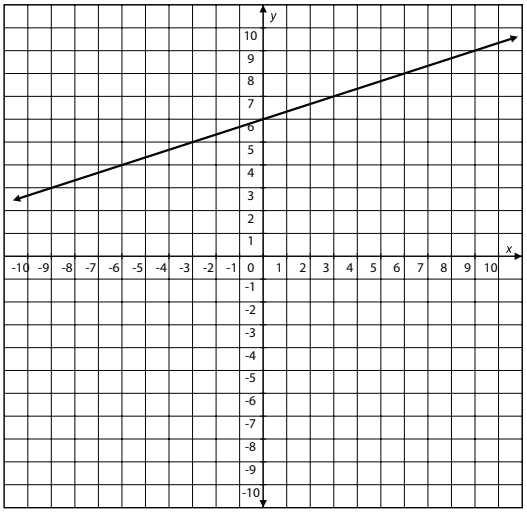


2. Which function has a greater rate of change? Which function has the greater *y*-intercept? Explain how you know.

Function A

x	$f(x)$
–14	–2
–7	–3
0	–4
7	–5

Function B



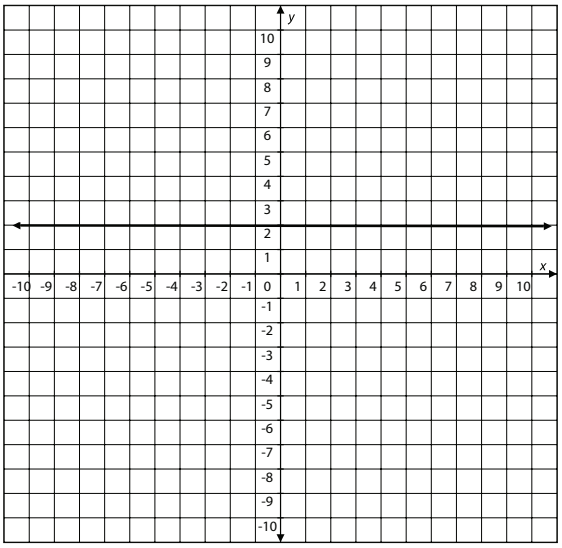
continued

3. Compare the properties of each function.

Function A

$$f(x)=\frac{2}{3}x+9$$

Function B

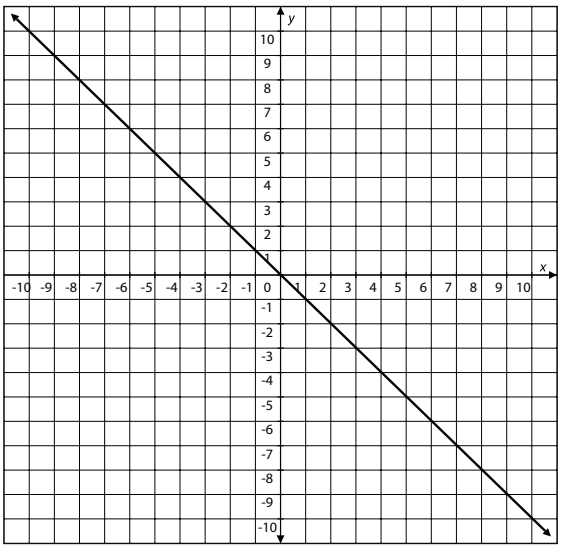


4. Compare the properties of each function.

Function A

$f(x) = 3x$

Function B



continued

5. Compare the properties of each function.

Function A

The table describes the profit in dollars made on ice creams sold by a street vendor.

Number of ice creams sold (x)	Profit ($f(x)$)
0	0
20	4.60
40	9.20
60	13.80

Function B

For each hot dog sold, the same vendor makes a profit of $0.20.

6. Compare the properties of each function.

Function A

The local community magazine began with a circulation of 3,400 subscribers in its first year. Since then, its circulation has increased by 175 subscribers per year.

Function B

The function $f(x) = 95x + 2200$ represents the circulation of another magazine in a nearby community, where $f(x)$ represents total subscriptions and x represents the number of years since it began its circulation.

7. Compare the properties of each function.

Function A

A game store charges $3.50 to rent a video game for one night, plus an additional $2 per day thereafter.

Function B

The table shows the total cost to rent the same game at a different rental store, where $f(x)$ represents the total cost in dollars after x days.

x	$f(x)$
2	6.00
3	8.50
4	11.00
5	13.50

continued

8. Compare the properties of each function.

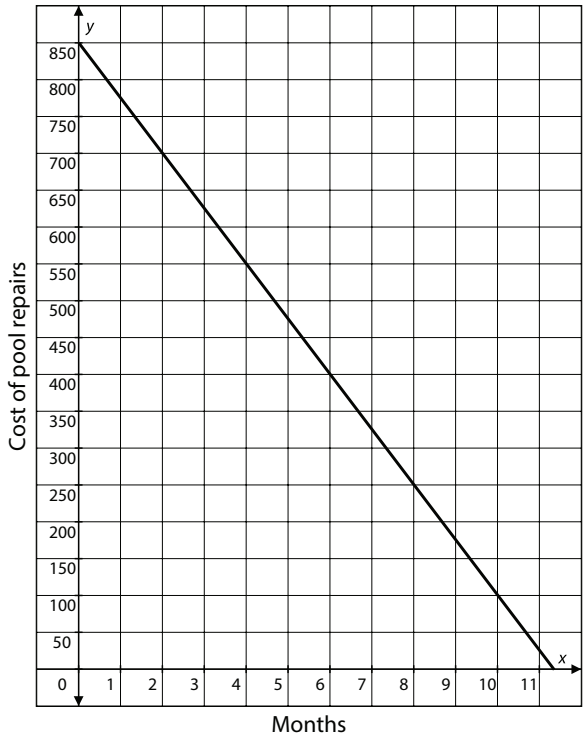
Function A

The following table shows the remaining balance, $f(x)$, of the cost of pool repairs after x months.

x	$f(x)$
0	1200
2	1050
4	900
6	750

Function B

This graph shows the remaining balance, $g(x)$, of the cost of pool repairs after x months.



9. Compare the properties of each function. What do the rate of change and y-intercept mean in terms of the scenarios?

Function A

The function $f(x) = 12.5 - 0.32x$ represents $f(x)$, the amount of cat food remaining in pounds when a cat is fed the same amount each day for x days.

Function B

The table represents $g(x)$, the amount of cat food remaining in pounds when a cat is fed the same amount each day for x days.

x	$g(x)$
3	9.04
4	8.72
5	8.40
6	8.08

continued

10. Compare the properties of each function. What do the rate of change and *y*-intercept mean in terms of the scenarios?

Function A

Sophie ran 8 miles last week and plans to run 2 miles each additional week.

Function B

The following graph represents Kaelina's running plan.