Name: _____ **Class:** _____ **Date:** _____ **ID: A**

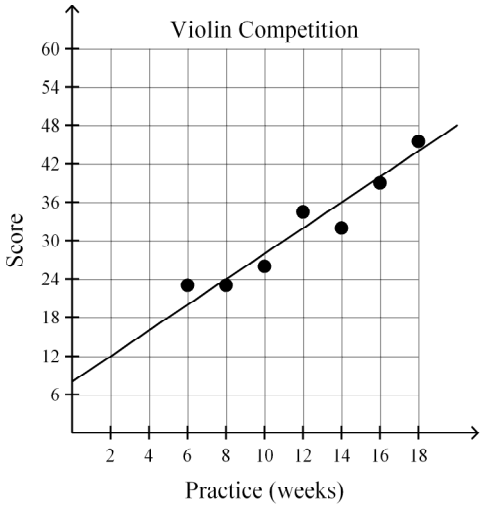
Algebra 1 Semester 2 Final Exam Review Multiple Choice

Multiple Choice
Identify the choice that best completes the statement or answers the question.

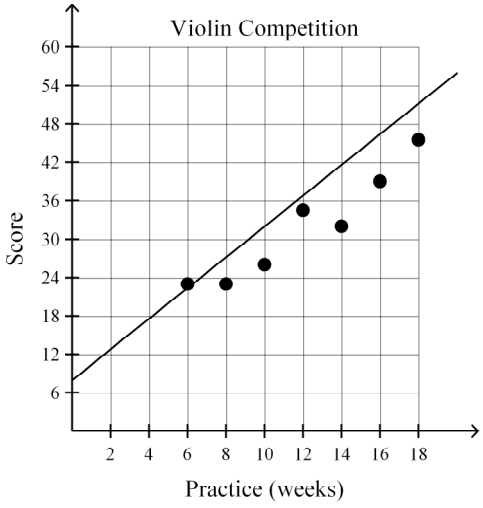
1 Which graph shows the best trend line for the following data?

Practice (weeks)	6	8	10	12	14	16	18
Score	23	23	26	34.5	32	39	45.5

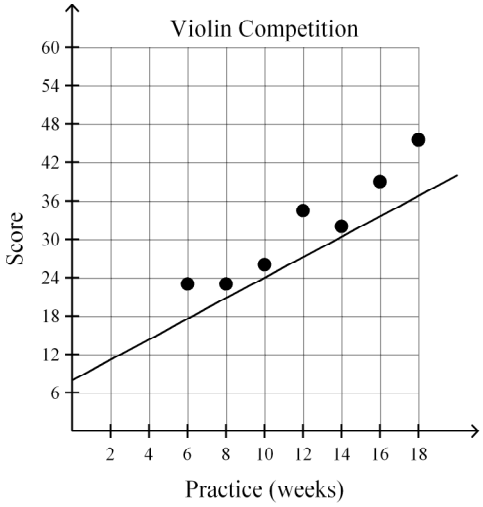
A



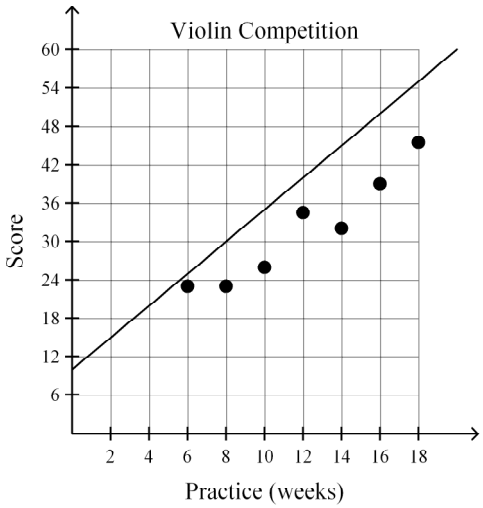
B



C



D



The rate of change is constant in each table. Find the rate of change. Explain what the rate of change means for the situation.

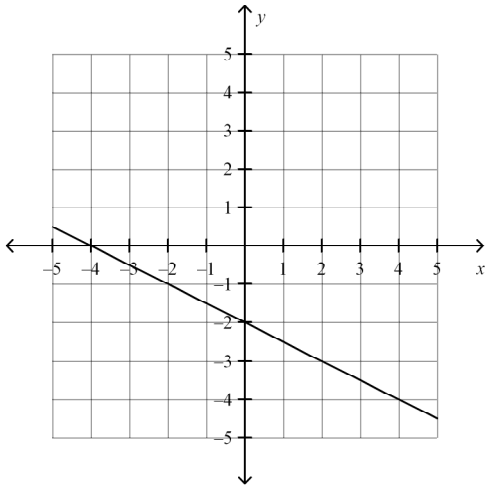
2

Time (hours)	Distance (miles)
4	212
6	318
8	424
10	530

A 212; Your car travels 212 miles. **B** $\frac{53}{1}$; Your car travels 53 miles every 1 hour. **C** 10; Your car travels for 10 hours. **D** $\frac{1}{53}$; Your car travels 53 miles every 1 hour.

Find the slope of the line.

3



A $-\frac{1}{2}$ **B** -2 **C** $\frac{1}{2}$ **D** 2

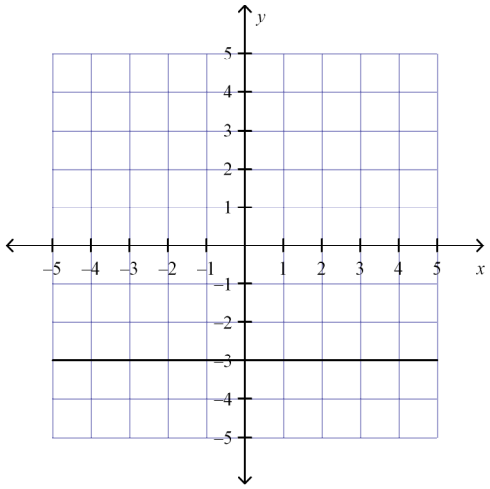
Find the slope of the line that passes through the pair of points.

4 (4, 4), (9, –3)

A $-\frac{7}{5}$ **B** $-\frac{5}{7}$ **C** $\frac{5}{7}$ **D** $\frac{7}{5}$

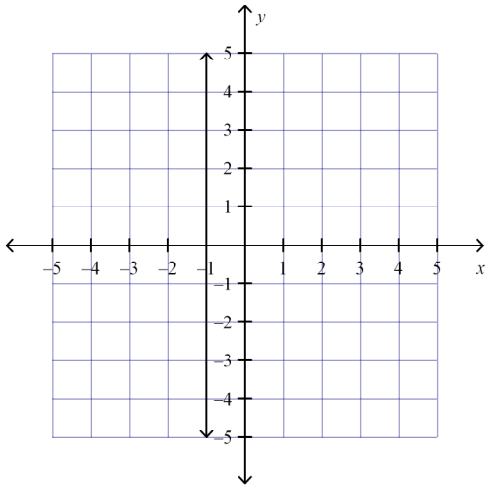
State whether the slope is 0 or undefined.

5



A 0 **B** undefined

6



A undefined **B** 0

Find the slope and *y*-intercept of the line.

7 $y = \frac{2}{5}x - 10$

A $\frac{2}{5}; -10$ **B** $-10; \frac{2}{5}$ **C** $10; \frac{2}{5}$ **D** $\frac{5}{2}; 10$

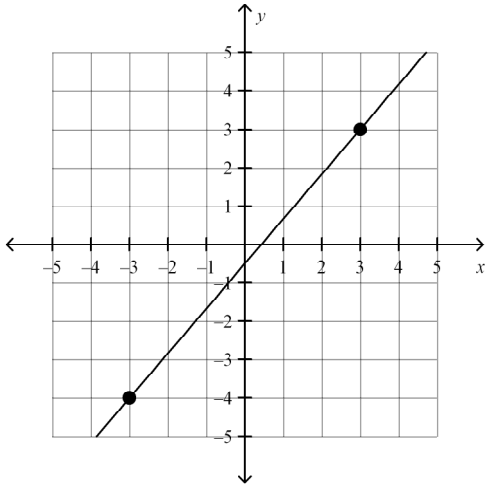
Tell whether the lines for each pair of equations are *parallel*, *perpendicular*, or *neither*.

8 $7x - 4y = 4$
$x - 4y = 3$
A perpendicular **B** parallel **C** neither

9 $y = \frac{3}{8}x + 12$
$8x + 3y = -5$
A neither **B** perpendicular **C** parallel

Write the slope-intercept form of the equation for the line.

10



A $y = -\frac{7}{6}x - \frac{1}{2}$ **B** $y = \frac{6}{7}x + \frac{1}{2}$ **C** $y = \frac{7}{6}x - \frac{1}{2}$ **D** $y = \frac{6}{7}x - \frac{1}{2}$

Solve the system of equations using substitution.

11 $y = 2x - 3$
$y = 4x - 9$
A (2, 1) **B** (3, 3) **C** (4, 6) **D** (2, –1)

Solve the system using elimination.

12 $6x + 3y = -12$
$6x + 2y = -4$
A (10, –16) **B** (2, –8) **C** (–2, 8) **D** (–10, 16)

Simplify the expression.

13 $(-6.4)^0$

A 1 **B** –1 **C** 0 **D** –6.4

14 $7a^3t^{-5}$

A $7a^{-3}t^5$ **B** $\frac{7a^3}{t^5}$ **C** $7at^{-15}$ **D** $\frac{a^3}{7t^5}$

15 $\frac{9}{a^{-3}b^8}$

A $\frac{9}{ab^5}$ **B** $\frac{9}{a^3b^8}$ **C** $\frac{9a^3}{b^8}$ **D** $\frac{27a}{b^8}$

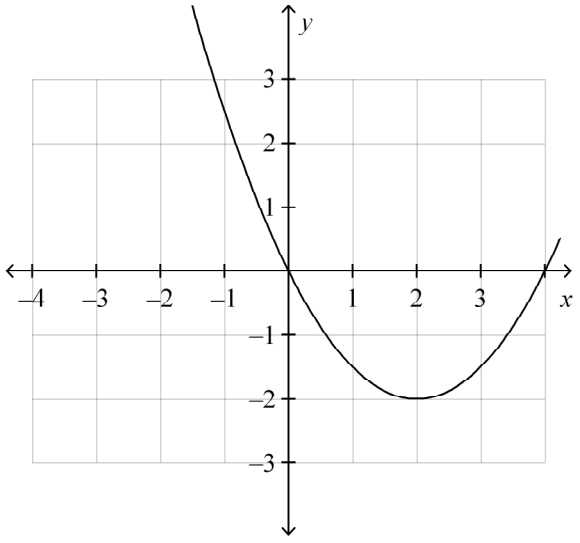
16 $(y^4)^3$

A $2y^{12}$ **B** y^{64} **C** y^7 **D** y^{12}

17 $\frac{7^{11}}{7^{10}}$

A 7^{110} **B** $\frac{1}{7^7}$ **C** 7 **D** 7^{21}

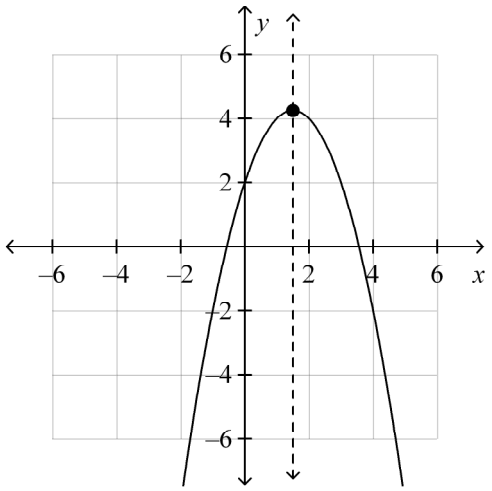
18 Identify the vertex of the graph. Tell whether it is a minimum or maximum.



A (–2, 2); minimum **B** (–2, 2); maximum **C** (2, –2); minimum **D** (2, –2); maximum

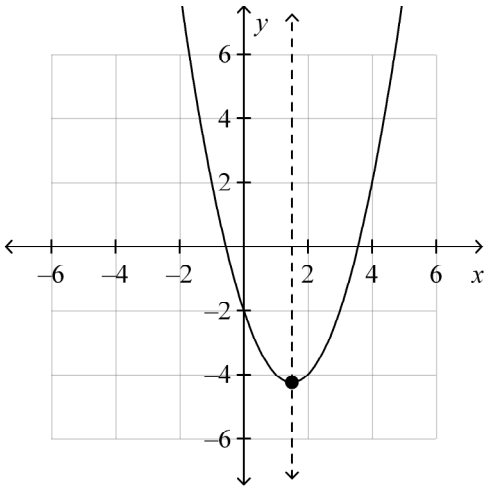
19 Graph $f(x) = -x^2 + 3x + 2$. Label the axis of symmetry and vertex.

A



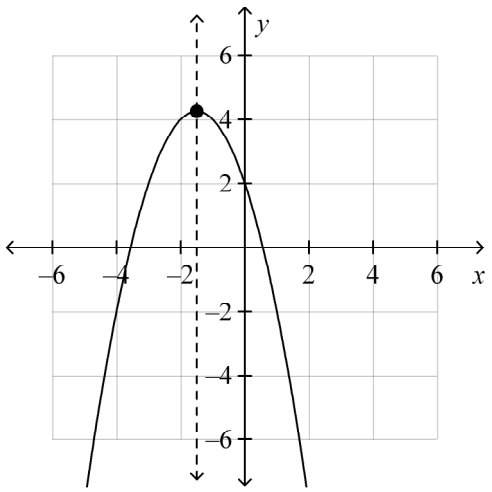
Axis of symmetry: $x = 1.5$
Vertex: $(1.5, 4.25)$

C



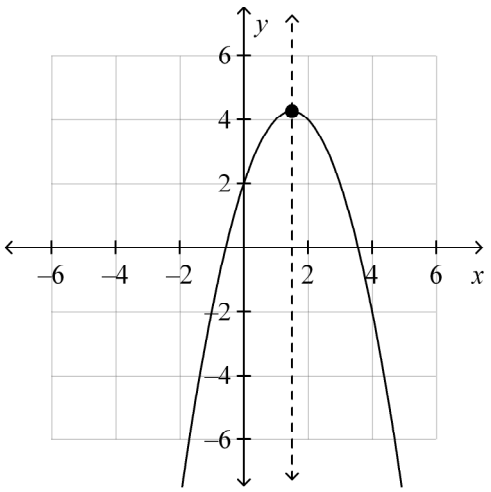
Axis of symmetry: $x = 1.5$
Vertex: $(1.5, -4.25)$

B



Axis of symmetry: $x = -1.5$
Vertex: $(-1.5, 4.25)$

D



Axis of symmetry: $x = 1.5$
Vertex: $(1.5, -4.25)$