

Key

Algebra 2 Chapter 2 - Review Sheet

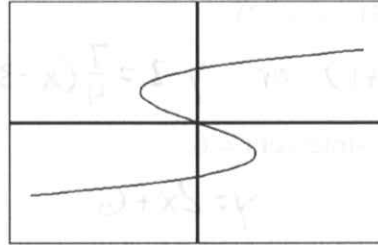
1. State the domain and the range. Is the relation a function?

$\{(-3,2), (-2,1), (-1,0), (-1,1), (0,1)\}$

D: $\{-3, -2, -1, 0\}$ R: $\{0, 1, 2\}$ No

2. Is the relation graphed a function?

No



3. If $f(x) = 5x^2 - 8x$, find $f(-2)$. ≈ 36

Graph each equation or inequality.

4. $y = -x + 5$

5. $y = 3x + 2$

6. $y = \lfloor x + 1 \rfloor$

7. $y = |x - 3|$

8. $y = \begin{cases} -\frac{1}{2}x - 3, & x \leq 0 \\ x + 2, & x > 0 \end{cases}$

9. $-2x + 1 \leq y$

see back page
for graphs

10. State the domain and range for problem 7.

D: All \mathbb{R}
R: $y \geq 0$

11. Is $y = x(x + 3)$ linear or not linear?

Not Linear because x^2

12. Write $y = \frac{5}{8}x - 2$ in standard form.

$5x - 8y = 16$ or $-5x + 8y = -16$

13. Determine the slope of the line passing through (5,9) and (3,1).

$m = 4$

14. Determine the slope of the line passing through (-2,4) and (-2,-7)

$m = \text{undefined}$

15. Find the x- and y- intercept for the line $-2x = 20 + 5y$.

x-int: -10

y-int: -4

Find a linear equation for each graph described.

16. slope = 2, pass through (1,5)

$$y - 5 = 2(x - 1) \text{ or } y = 2x + 3$$

17. passes through (-1,-5) and (3,2)

$$y + 5 = \frac{7}{4}(x + 1) \text{ or } y - 2 = \frac{7}{4}(x - 3) \text{ or } y = \frac{7}{4}x - \frac{13}{4}$$

18. x-intercept = -3 and y-intercept = 6.

$$y = 2x + 6$$

19. slope = -1/2, x-intercept = 4

$$y = -\frac{1}{2}x + 2 \text{ or } y = -\frac{1}{2}(x - 4)$$

20. passes through (2,5) and is perpendicular to a line whose equation is $y - 7x = 4$

$$y - 5 = -\frac{1}{7}(x - 2)$$

21. passes through (1,4) and is parallel to the line whose equation is $y - 7x = 4$

$$y - 4 = 7(x - 1)$$

Use the information in the table to solve the following problems.

The table shows the relationship between the field goals attempted and points scored by one basketball player over a six game period.

field goals attempted (x)	8	6	10	9	7	10
points scored (y)	12	9	14	14	11	15

22. Using your calculator, find a prediction equation (model) to show how the points scored are related to the field goals attempted. Do not round the decimals.

$$y \approx 1.35x + 1.25$$

x = field goal attempts
y = points scored.

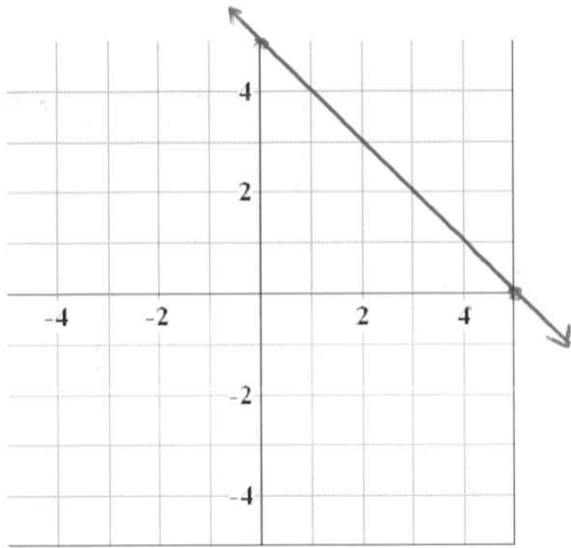
23. Using your model, predict the points scored if 20 field goals are attempted. (Round using the greatest integer concept)

28 points

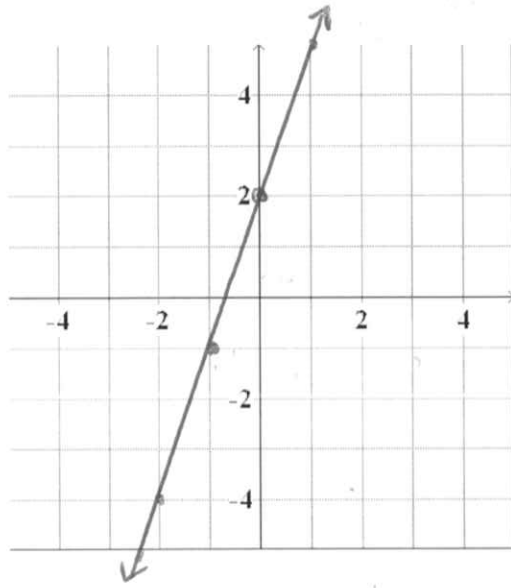
24. According to your model, how many points are being scored per field goal attempt?

≈ 1.35 points / fieldgoal attempt.

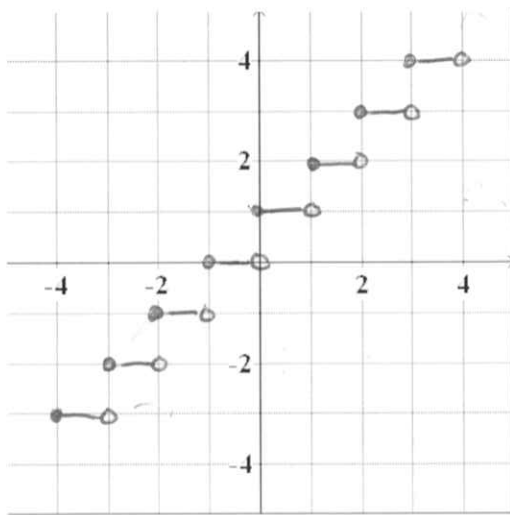
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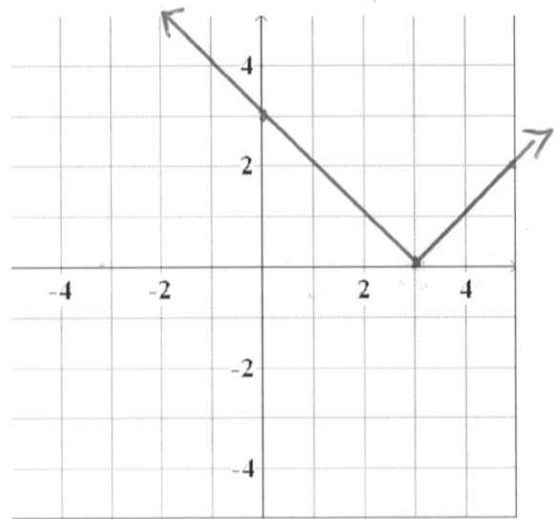
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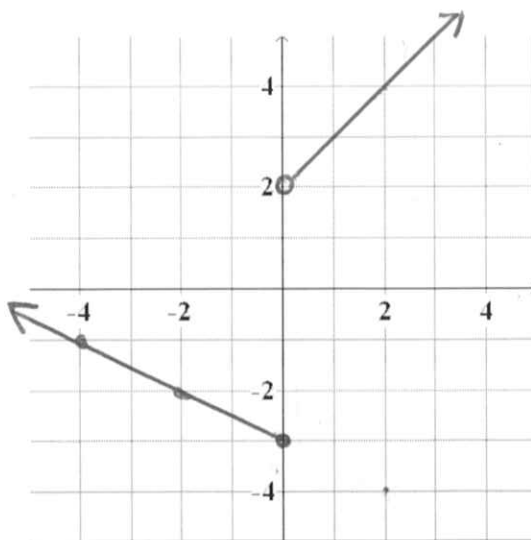
6.



7.



8.



9.

