Summer Assignment

Date_____ Period____

Solve each equation.

1) $4(1 + 5x) = 144$

2) $-6 + 8(2b + 4) = 106$

3) $8(5v + 1) = 8 - 4v$

4) $-8(8 + 4p) = -7p + 11$

5) $-7(n - 7) = -5(n - 5)$

6) $2m - (1 + 3m) = -(m - 3)$

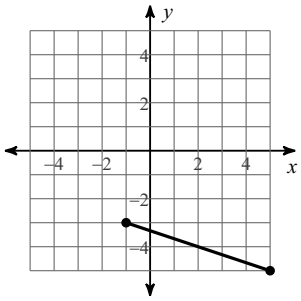
Find the distance between each pair of points. Simplify the radical, do not put it in decimal form.

7) $(3, -7),\ (-6, 0)$

8) $(2, 5),\ (5, 5)$

9) $(5, -2), (6, 0)$

10)



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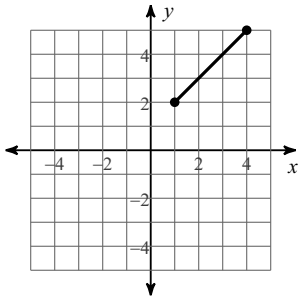

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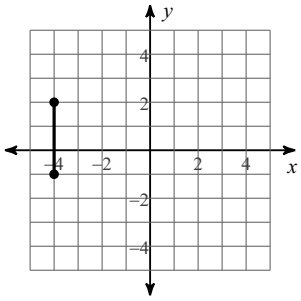


Solve each proportion.

13) $\frac{2}{p} = \frac{7}{6}$

14) $\frac{m-3}{2} = \frac{5}{4}$

15) $\frac{p+5}{6} = \frac{p}{3}$

16) Yellowstone National Park is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 9 vans and 14 buses with 513 students. High School B rented and filled 9 vans and 1 bus with 162 students. Each van and each bus carried the same number of students. How many students can a van carry? How many students can a bus carry?

17) The school that DeShawn goes to is selling tickets to a play. On the first day of ticket sales the school sold 8 senior citizen tickets and 12 student tickets for a total of $180. The school took in $167 on the second day by selling 8 senior citizen tickets and 11 student tickets. What is the price each of one senior citizen ticket and one student ticket?

18) The state fair is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 4 vans and 10 buses with 602 students. High School B rented and filled 10 vans and 6 buses with 422 students. Every van had the same number of students in it as did the buses. How many students can a van carry? How many students can a bus carry?

19) Joe's school is selling tickets to a play. On the first day of ticket sales the school sold 7 adult tickets and 11 child tickets for a total of $249. The school took in $231 on the second day by selling 3 adult tickets and 13 child tickets. What is the price each of one adult ticket and one child ticket?

Simplify each expression.

20) $-2x - 4x$

21) $-6x + 6x$

22) $9(-4 + 4n)$

23) $6(3 + 7x)$

24) $9(3 + 3m) - 8m$

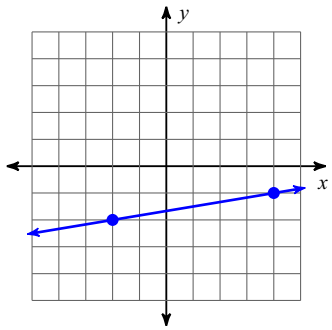
25) $6(-8 + x) - 1$

26) $-k - 5k(-4 + 10k)$

27) $8x + 3x(x + 2)$

Find the slope of each line.

28)



Find the slope of the line through each pair of points.

29) $(-9, 3), (4, 10)$

Find the slope of each line.

30) $y = x + 3$

Find the slope of a line parallel to each given line.

31) $y = 0$

Find the slope of a line perpendicular to each given line.

32) $y = \frac{3}{5}x + 1$