Algebra 2 Placement Test

Section 1

Evaluate each expression below.

1. $5 - 3(x - 1)$ when $x = 7$

2. $4x^2 - 5x + 1$ when $x = -2$

Algebra 2 Readiness Test 1

Answers

1. -13

2. 27

Algebra 2 Placement Test

Section 1

Simplify each expression below.

3. $y(y-11)$

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

5. $(y-1)(y^2+2y+1)$

6. $(\sqrt{2}\cdot\sqrt{3})^2$

7. $(7x^2)(x^4)(-5x)$

8. $\dfrac{4x^4-x^3}{8x-2}$

Algebra 2 Readiness Test 1

3. $y^2 - 11y$

4. $x^2 + 3x - 18$

5. $y^3 + y^2 - y - 1$

6. 6

7. $-35x^7$

8. $\dfrac{x^3}{2}$

Algebra 2 Placement Test

Section 1

Solve each equation below.

9. $6x + 7 = 31$

10. $3y + \dfrac{1}{4}y = 26$

11. $12(x-1) = 8(x+1)$

12. $\dfrac{1}{2y} - \dfrac{2}{3y} = -\dfrac{3}{4}$

13. $5[1 - 2(x+2)] = 4x$

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9. $x = 4$

10. $y = 8$

11. $x = 5$

12. $y = \dfrac{2}{9}$

13. $x = -\dfrac{15}{14}$

Algebra 2 Placement Test

Section 1

Translate each problem below into an equation and solve.

14. Victoria and Margaret are 625 miles apart and traveling straight toward each other. If Victoria's speed is 55 mph and Margaret's speed is 70 mph, how many hours will it be before the two meet?

15. Mike, a Salvation Army bell ringer, has 5 fewer quarters than nickels in his cup. If Mike has $5.95 in quarters and nickels, how many nickels does he have?

Answers

14. 5 hours

15. 24 nickels

Algebra 2 Placement Test

Section 2

Solve each equation or inequality below. Make sure to give *all* solutions.

16. $7x + 6 \leq 34$ **17.** $2x^2 - 8 = 10$

18. $3x^2 + 15x = 0$

Answers

16. $x \leq 4$

17. $3, -3$

18. $0, -5$

Algebra 2 Placement Test

Section 2

Answer each question below.
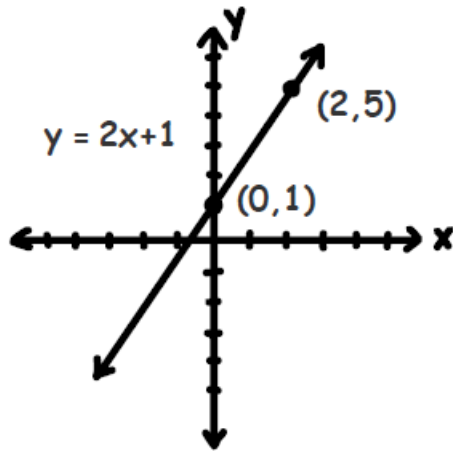
19. In the equation $y = 4x - 7$, find y when $x = -2$.

20. Graph the equation $y = 2x + 1$ on a coordinate plane.

21. Graph the equation $y + 3x = 4$ on a coordinate plane.

22. Find the x and y-intercepts of the graph of the equation $y = 5x - 10$.

23. Find the slope of the graph of the equation $y = 5x - 10$.
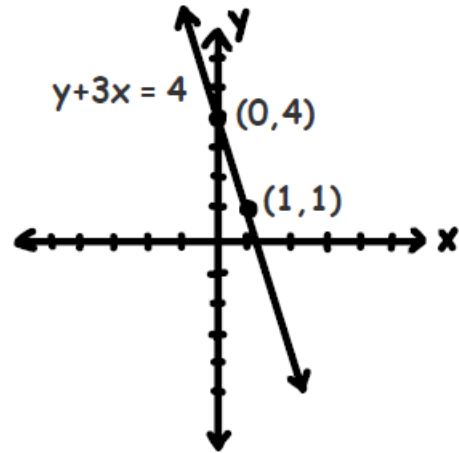
Algebra 2 Readiness Test 1

19. $y = -15$

20.

y = 2x+1, with points (2,5) and (0,1)

21.

y+3x = 4, with points (0,4) and (1,1)

22. x-intercept: $(2, 0)$;
y-intercept:
$(0, -10)$

23. slope $= 5$

Algebra 2 Placement Test

Section 2

Simplify each expression below.

24. $13x^2y - 9x^2y$

25. $xy(x^2 + y^2)$

26. $\dfrac{q}{ps^3} - \dfrac{r}{ps^3}$

27. $\dfrac{x+y}{x^2 + 2xy + y^2}$

Answers

24. $4x^2 y$

25. $x^3 y + xy^3$

26. $\dfrac{q - r}{ps^3}$

27. $\dfrac{1}{x + y}$

Algebra 2 Placement Test

Section 2

Answer each question below.

28. In the equation $y = ax^2 + bx + c$, find the value of y when $x = 2$, $a = 1$, $b = 3$, and $c = 5$.

29. Solve the equation $3n - n = b - 1$ for n in terms of b.

30. Solve the system of equations $\begin{cases} 4x - 2y = 10 \\ x + 2y = 15 \end{cases}$ for x and y.

Answers

28. $y = 15$

29. $n = \dfrac{b-1}{2}$

30. $x = 5$, $y = 5$