

Mathematics 20-1
Final Exam Review

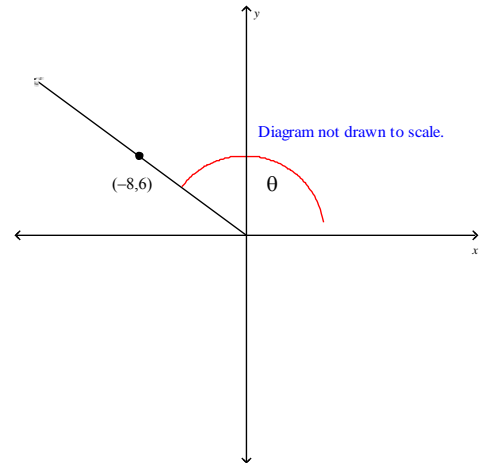
Name: _____
Date: _____

Directions: Identify the choice that best completes the statement or answers the question.

- _____ 1. Which of the following numbers occurs in the sequence $-12, -8, -4, 0, 4, \dots$?
- A 6
B -3
C 24
D 15
- _____ 2. The common difference in the arithmetic sequence $2, -6, -14, -22, \dots$ is
- A -8
B -3
C -16
D 8
- _____ 3. Which of the given formulas for the general term of the sequence $-9, -1, 7, 15, 23, \dots$ is correct?
- A $t_n = -8n - 17$
B $t_n = 8n - 17$
C $t_n = 8n - 1$
D $t_n = -8n - 1$
- _____ 4. What is the 18th term of the sequence $-22, -21.2, -20.4, -19.6, -18.8, \dots$?
- A -6.8
B 0.8
C -8.4
D -35.6
- _____ 5. The sum of the series $(-5) + (-7) + (-9) + \dots + (-19)$ is
- A -96
B -304
C -192
D 26
- _____ 6. The sum of an arithmetic series where $t_1 = -2$, $t_3 = 7$, and $n = 15$ is
- A -502.5
B 442.5
C 476.25
D 885
- _____ 7. The sum of an arithmetic series where $t_1 = \frac{1}{2}$, $d = 3$, and $n = 19$ is
- A 551
B $\frac{165}{2}$
C $\frac{1045}{2}$
D 1045

22. The coordinates of a point P on the terminal arm of an angle are shown. What are the exact trigonometric ratios for $\sin \theta$, $\cos \theta$, and $\tan \theta$?

- A $\sin A = -\frac{4}{5}$, $\cos A = \frac{3}{5}$, $\tan A = -\frac{4}{3}$
- B $\sin A = \frac{5}{3}$, $\cos A = -\frac{5}{4}$, $\tan A = -\frac{3}{4}$
- C $\sin A = \frac{3}{5}$, $\cos A = -\frac{4}{5}$, $\tan A = -\frac{3}{4}$
- D $\sin A = \frac{4}{5}$, $\cos A = -\frac{3}{5}$, $\tan A = -\frac{3}{4}$



23. Determine the length of x , to the nearest tenth of a centimetre.

- A 26.6
- B 36.5
- C 11.2
- D 17.1

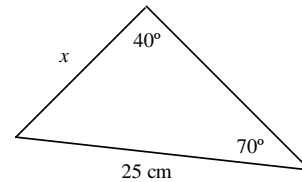


Diagram not drawn to scale.

24. If $\angle B = 58.8^\circ$, $c = 10.3$ cm, and $b = 10.5$ cm, and $\triangle ABC$ is acute, what is the measure of $\angle C$, to the nearest tenth of a degree?

- A 57°
- B 123.0°
- C 30.5°
- D 149.5°

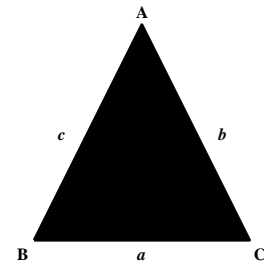


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25. Determine the measure of x , to the nearest tenth of a degree.

- A 25.6°
- B 18.1°
- C 136.3°
- D 71.9°

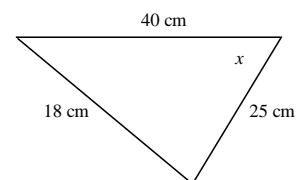
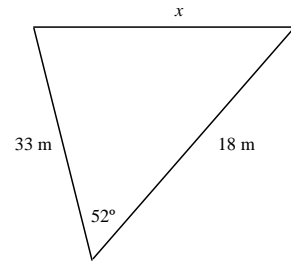


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26. What is the length of x , to the nearest tenth of a metre?

- A 27.7 m
- B 21.8 m

- C 26.1 m
- D 37.6 m



27. If $\angle Q = 31^\circ$, $r = 20$ cm, and $p = 23$ cm, what is the length of q , to the nearest centimetre?

- A 21 cm
- B 30 cm

- C 12 cm
- D 11 cm

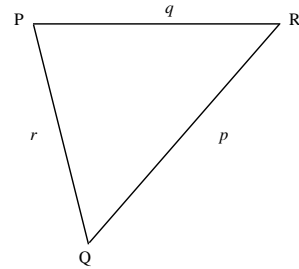
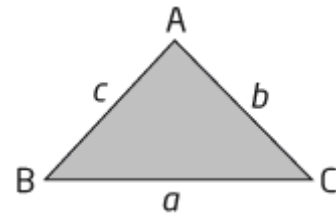


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28. Solve the following triangle, rounding side lengths to the nearest tenth of a unit and angle measures to the nearest degree.

- A $\angle B = 22^\circ$, $\angle C = 6^\circ$, $c = 5.0$
- B $\angle B = 158^\circ$, $\angle C = 84^\circ$, $c = 5.0$
- C $\angle B = 68^\circ$, $\angle C = 174^\circ$, $c = 28.7$
- D $\angle B = 35^\circ$, $\angle C = 7^\circ$, $c = 28.2$



$\angle A = 152^\circ$, $b = 19$, $a = 23.5$

29. What is the axis of symmetry of $f(x) = 2(x + 6)^2 - 3$?

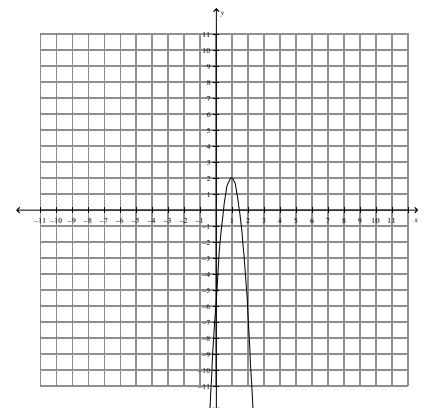
- A $x = 2$
- B $x = -3$

- C $x = -6$
- D $x = 6$

30. What is the quadratic function in vertex form for the parabola shown below?

- A $f(x) = -8(x - 2)^2 + 1$
- B $f(x) = -8(x - 1)^2 + 2$

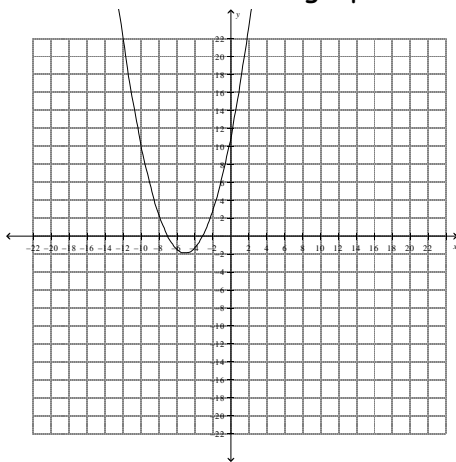
- C $f(x) = 8(x + 1)^2 + 1$
- D $f(x) = 8(x - 1)^2 - 2$



____35. What information can be determined from the quadratic function $f(x) = \frac{2}{3}(x+2)^2 - 9$?

- A the vertex is at $(-2, -9)$ and the graph opens upward
- B the vertex is at $(-9, -2)$ and the graph opens downward
- C the vertex is at $(-2, -9)$ and the graph opens downward
- D the vertex is at $(-9, -2)$ and the graph opens upward

____36. Identify the characteristics of this graph.



- | | |
|--|--|
| <p>A vertex: $(-2, -5)$
axis of symmetry: $x = -2$
y-intercept: 10.5
x-intercepts: -3 and -7
opens downward</p> | <p>C vertex: $(-2, -5)$
axis of symmetry: $x = -2$
y-intercept: 10.5
x-intercepts: -3 and -7
opens upward</p> |
| <p>B vertex: $(-5, -2)$
axis of symmetry: $x = -5$
y-intercept: 10.5
x-intercepts: -3 and -7
opens upward</p> | <p>D vertex: $(-5, -2)$
axis of symmetry: $x = -2$
y-intercept: 10.5
x-intercepts: 3 and 7
opens downward</p> |

____37. What are the coordinates of the vertex of the quadratic function $y = 4x^2 + 8x - 2$?

- | | |
|---------------------------------------|---------------------------------------|
| <p>A $(-6, -1)$</p> | <p>C $(-1, -6)$</p> |
| <p>B $(8, -2)$</p> | <p>D $(8, -6)$</p> |

____38. What is the equation of the quadratic function $y = x^2 + 24x + 29$ in vertex form?

- | | |
|---|---|
| <p>A $y = (x+12)^2 - 173$</p> | <p>C $y = (x-12)^2 - 173$</p> |
| <p>B $y = (x-12)^2 - 115$</p> | <p>D $y = (x+12)^2 - 115$</p> |

___39. State whether the function $y = 4x^2 - 36x - 43$ has a maximum or minimum value and identify the coordinates of the vertex.

A maximum at $(4.5, -124)$

C minimum at $(-124, 4.5)$

B maximum at $(-124, 4.5)$

D minimum at $(4.5, -124)$

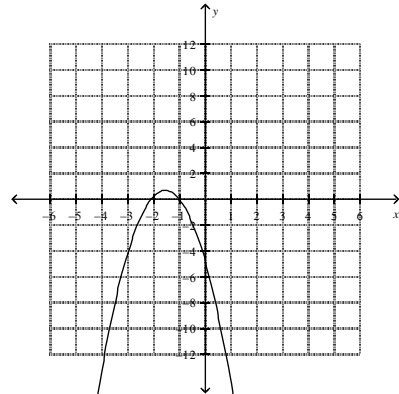
___40. How many x -intercepts does the graph of the quadratic function $f(x) = -2.3x^2 - 6.9x - 4.6$ have?

A unknown

C 1

B 2

D 0



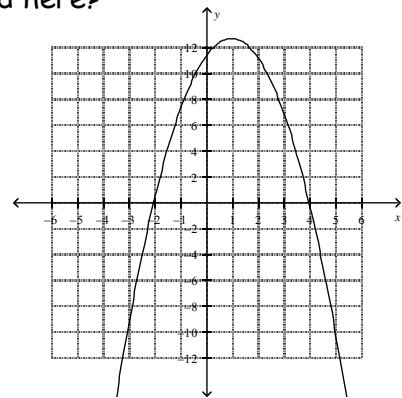
___41. What are the x -intercepts of the quadratic function graphed here?

A 2 and -4

C 11.2

B -2 and 4

D 12.6



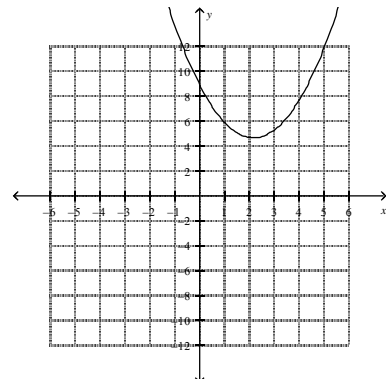
___42. What are the x -intercepts of the quadratic function graphed here?

A 4.6

C -2.2

B there are none

D 9.0



___43. What are the roots of the quadratic function $y = 0.5x^2 + 3.5x + 6$?

- A -0.125
- B 4 and 3

- C -4 and -3
- D 6

___44. Factor $x^2 - 20x + 75$ completely.

- A $(x-5)(x+15)$
- B $(x+5)(x+15)$

- C $(x+5)(x-15)$
- D $(x-5)(x-15)$

___45. Factor $-4x^2 + 68x - 120$ completely.

- A $-4(x-2)(x-15)$
- B $-4(x+2)(x+15)$

- C $-4(x+2)(x-15)$
- D $-4(x-2)(x+15)$

___46. Solve $-8x^2 + 120x + 432 = 0$.

- A $x = 18$ and $x = -3$
- B $x = -18$ and $x = 3$

- C $x = \frac{9}{4}$ and $x = -\frac{3}{8}$
- D $x = -144$ and $x = 24$

___47. Determine the roots of the quadratic equation $-5x^2 + 55x = 50$.

- A $x = -10$ and $x = -1$
- B $x = -50$ and $x = -5$

- C $x = 10$ and $x = 1$
- D $x = 2$ and $x = \frac{1}{5}$

___48. Solve $(x+4)(x-9) = 0$.

- A $x = 4$ and $x = -9$
- B $x = 4$ and $x = 9$

- C $x = -4$ and $x = 9$
- D $x = -4$ and $x = -9$

___49. A rectangle has dimensions $x+10$ and $5x-4$, where x is in centimetres. If the area of the rectangle is 72 cm^2 , what is the value of x , to the nearest tenth of a centimetre?

- A $x = 2.0$
- B $x = -4.6$

- C $x = 11.2$
- D $x = -11.2$

___50. The vertex form of $4x^2 + 16x + 11 = 0$ is

- A $4(x+5)^2 - 2 = 0$
- B $4(x-2)^2 + 5 = 0$

- C $4(x+2)^2 - 5 = 0$
- D $4(x-2)^2 - 5 = 0$

51. Which is the vertex form of $2x^2 - 12x - 10 = 0$? Round coefficients to the nearest hundredth if necessary.

A $2(x+3)^2 - 28 = 0$

C $2(x+3)^2 + 28 = 0$

B $2(x-28)^2 - 3 = 0$

D $2(x-3)^2 - 28 = 0$

52. Solve $(x+1)^2 = 43$.

A $1 + \sqrt{43}$ and $1 - \sqrt{43}$

C $2\sqrt{11}$

B $-1 + \sqrt{43}$ and $-1 - \sqrt{43}$

D $\sqrt{42}$

53. A rectangle with an area of 2504 cm^2 is x centimetres wide and $(x+8)$ centimetres long. To the nearest tenth of a centimetre, the width and length are

A 50.0 cm and 50.0 cm

C 46.2 cm and 54.2 cm

B -46.2 cm and -54.2 cm

D -14.0 cm and 114.0 cm

54. When Alex rides his dirt bike off a ramp, his path can be modelled by $h(d) = -3.9d^2 + 13.1d + 8.7$, where d is the horizontal distance from the ramp and h is the height, both in metres. How far away from the ramp does he land, to the nearest tenth of a metre?

A 2.0 m

C 7.9 m

B 0.6 m

D 3.9 m

55. For a science experiment, a projectile is launched. Its path is given by $h(d) = -4.0d^2 + 61.3d + 20.9$, where h is the height of the projectile above the ground and d is the horizontal distance of the projectile from the launch pad, both in metres. How far away from the launch pad is the projectile when it begins to fall, to the nearest tenth of a metre?

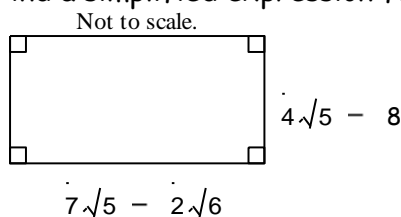
A 255.8 m

C 0.3 m

B 7.7 m

D 15.7 m

56. Find a simplified expression for the perimeter of this shape.



A $44\sqrt{5} - 8\sqrt{6} - 32$

C $12\sqrt{2} + 4\sqrt{3} + 4$

B $22\sqrt{5} - 4\sqrt{6} - 16$

D $4\sqrt{6} + \sqrt{3} - 8 - \sqrt{2}$

57. Simplify $3\sqrt{175} + 6\sqrt{63}$.

A $9 + \sqrt{238}$

B $33\sqrt{7}$

C $9 + 2\sqrt{2}$

D 114

58. Simplify $6\sqrt{80} - 2\sqrt{20}$.

A $4 + \sqrt{2}$

B $4 + 2\sqrt{15}$

C -36

D $20\sqrt{5}$

59. Express $-7\sqrt{6}(-6\sqrt{5} - 2\sqrt{6})$ in simplest form.

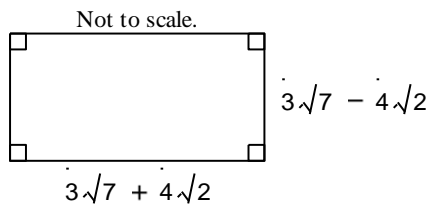
A $14\sqrt{6} + 42\sqrt{30}$

B 252

C $42\sqrt{30} + 84$

D $1260 + 14\sqrt{6}$

60. Find a simplified expression for the area of this shape.



A $9\sqrt{7} + 16\sqrt{2}$

B $9\sqrt{7} - 16\sqrt{2}$

C 95

D 31

61. Express $(\sqrt{19} - \sqrt{7})(\sqrt{19} + \sqrt{7})$ in simplest form.

A $2\sqrt{19} - 19\sqrt{7}$

B $2\sqrt{3}$

C 12

D $2\sqrt{19} - 2\sqrt{7}$

62. Solve $\sqrt{7x} = 5$.

A $x = \frac{25}{49}$

B $x = \frac{25}{7}$

C $x = \frac{5}{7}$

D $x = \frac{5}{49}$

63. Solve $\sqrt{6x+7} = \sqrt{7x+7} + 6$.

A $x = -6$

B $x = 24$

C $x = 6$

D $x = 12$

___64. Solve $\sqrt{x+3} = \sqrt{2x+8}$.

A $x = 25$

B $x = -5$

C $x = \frac{1}{25}$

D $x = -\frac{1}{5}$

___65. The non-permissible value(s) for the rational expressions $\frac{12}{x^2-4}$ is (are)

A $x \neq 2, x \neq -2$

B $x \neq 2\sqrt{3}$

C $x \neq 2$

D $x \neq 4$

___66. The non-permissible value(s) for the expression $\frac{-9x+8}{-9x^2-55x+56}$ is (are)

A $x \neq -\frac{8}{9}$

B $x \neq 8$

C $x \neq \frac{8}{9}$ and $x \neq -7$

D there are no restrictions

___67. Simplify $\frac{24x^2+101x+105}{9x^2+42x+49}$.

A $\frac{8x+15}{-3x-7}$

B $\frac{8x+15}{3x+7}$

C $\frac{-8x-15}{-3x-7}$

D $\frac{8x-15}{-3x+7}$

___68. What is the simplified version of the rational expression $\frac{-3x+12}{32-8x}$?

A $\frac{3}{8}(x-4)$

B $x-4$

C $\frac{3}{8}$

D $-\frac{3}{8}$

___69. Express the product $\frac{x^2+6x}{2x^2+15x+27} \times \frac{x+3}{x^2-36}$ in simplest form.

A $\frac{(x^2+6x)(x+3)}{(2x^2+15x+27)(x^2-36)}$

B $\frac{x}{(2x+9)(x-6)}$

C $\frac{x}{(2x-36)(x+6)}$

D $-\frac{1}{2x+9}$

___70. Express the quotient $\frac{x^2-5x-24}{x^2-11x+24} \div \frac{2x^2+7x+3}{x^2+x-12}$ in simplest form.

A $\frac{2x+1}{x+4}$

B $\frac{x+4}{2x+1}$

C $\frac{(x+3)(2x+1)}{(x-3)(x+4)}$

D $\frac{(x-3)(x+4)}{(x+3)(2x+1)}$

____71. When fully simplified, $\frac{13}{x+5} - \frac{12}{x+5}$ is equal to

A $\frac{13}{12}(x+5)$

C $\frac{1}{5}(x+5)$

B $\frac{25}{x+5}$

D $\frac{1}{x+5}$

____72. Simplify the rational expression $\frac{5x+3}{x^2} - \frac{8x^2+9}{x^3}$.

A $\frac{-8x^2+5x-6}{x^3}$

C $\frac{-3x^2+3x-9}{x^3}$

B $\frac{-8x^2+5x-6}{x^2}$

D $\frac{-3x^2+3x-9}{x^2}$

____73. When fully simplified, ignoring restrictions on the variable, $\frac{x+8}{x^2+9x+20} + \frac{x+5}{x^2+7x+12}$ is equal to

A $\frac{2x+13}{2x^2+16x+32}$

C $\frac{2x^2-21x-49}{(x+5)(x+4)(x+3)}$

B $\frac{(x+8)(x+5)}{(x^2+9x+20)(x^2+7x+12)}$

D $\frac{2x^2+21x+49}{(x+5)(x+4)(x+3)}$

____74. Solve the rational equation $\frac{x}{6} - \frac{5}{x} = 0$. Identify all non-permissible values.

A $x = \pm 6\sqrt{5}, x \neq 6$

C $x = \pm \sqrt{30}, x \neq 0$

B $x = 30, x \neq 6$

D $x = \frac{5}{6}, x \neq 0$

____75. Solve the rational equation $\frac{x}{x+1} = \frac{4-x}{x^2-3x-4} + \frac{6}{x-4}$.

A $x = 10$

C $x = -10$

B $x = 4$ and -1

D $x = -10$ and 1

____76. What is the exact solution to the equation $\frac{9x+2}{x-9} = 5$

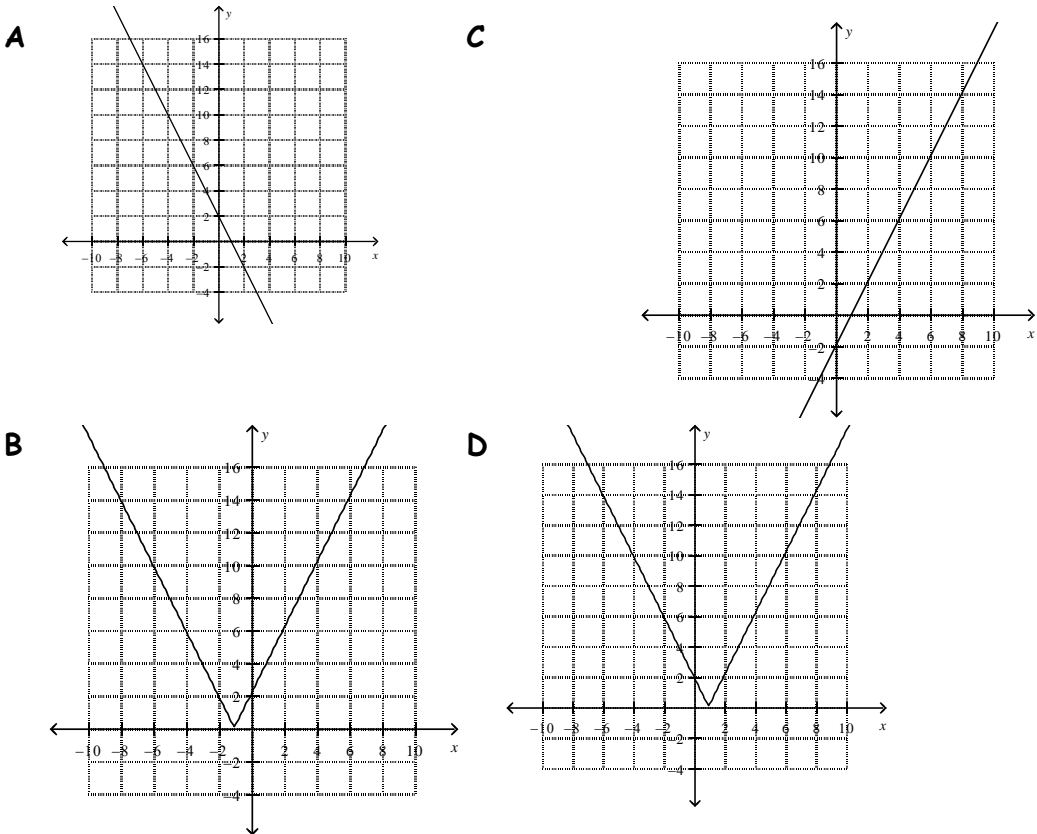
A $-\frac{28}{43}$

C $\frac{9}{5}$

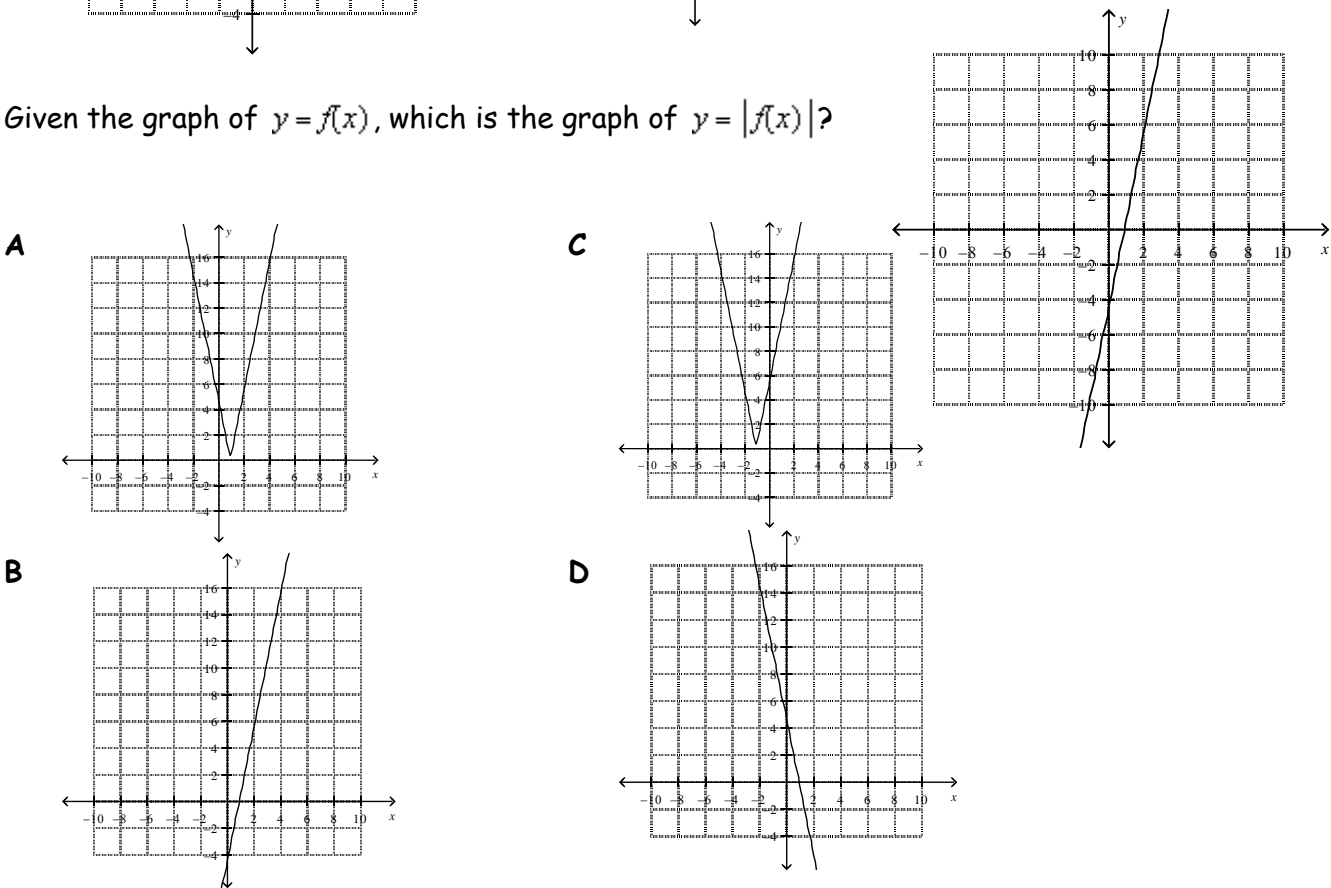
B $-\frac{2}{9}$

D $-\frac{43}{28}$

77. The graph of $y = |-2x + 2|$ is



78. Given the graph of $y = f(x)$, which is the graph of $y = |f(x)|$?



___79. What are the domain and range of $y = |-3x + 2|$?

A Domain: $\{x|x \in \mathcal{R}\}$

Range: $\{y|y \in \mathcal{R}\}$

C Domain: $\{y|y \in \mathcal{R}\}$

Range: $\{x|x \geq 0, x \in \mathcal{R}\}$

B Domain: $\{x|x \in \mathcal{R}\}$

Range: $\{y|y \geq 0, y \in \mathcal{R}\}$

D Domain: $\{x|x \leq 0, x \in \mathcal{R}\}$

Range: $\{y|y \in \mathcal{R}\}$

___80. What are the domain and range of $y = |6x^2 + 3x - 3|$?

A Domain: $\{x|x \in \mathcal{R}\}$

Range: $\{y|y \in \mathcal{R}\}$

C Domain: $\{x|x \leq 0, x \in \mathcal{R}\}$

Range: $\{y|y \in \mathcal{R}\}$

B Domain: $\{y|y \in \mathcal{R}\}$

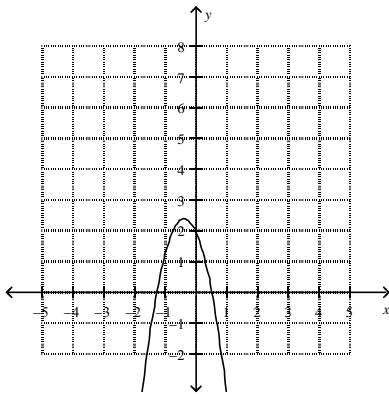
Range: $\{x|x \geq 0, x \in \mathcal{R}\}$

D Domain: $\{x|x \in \mathcal{R}\}$

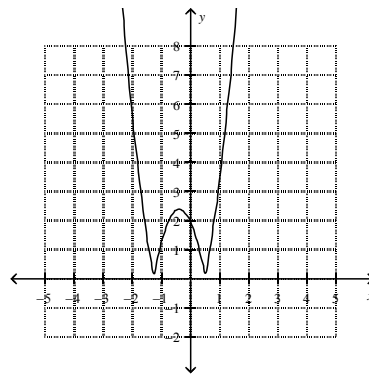
Range: $\{y|y \geq 0, y \in \mathcal{R}\}$

___81. The graph of $y = |-3x^2 + 2x + 2|$ is

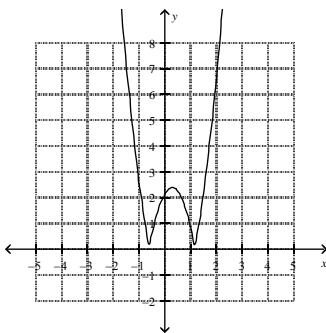
A



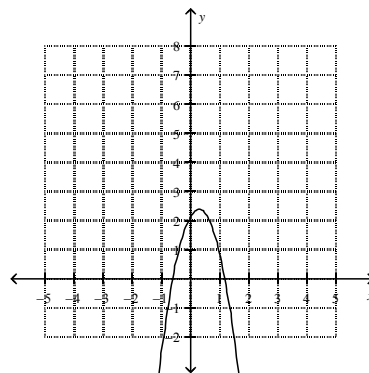
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B

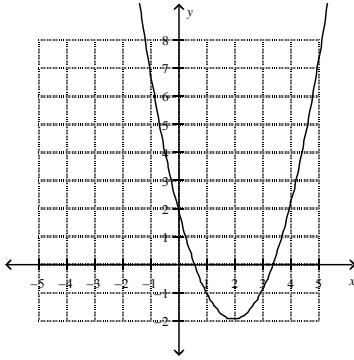


D

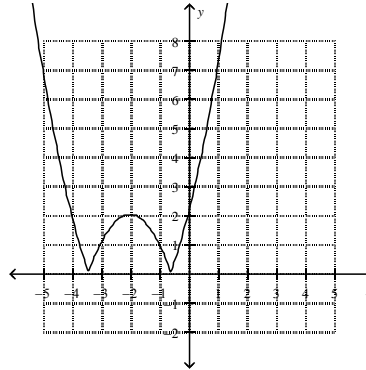


___82. The graph of $y = |(x+2)^2 - 2|$ is

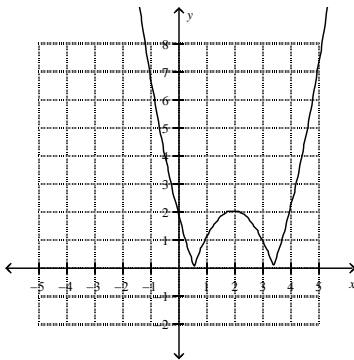
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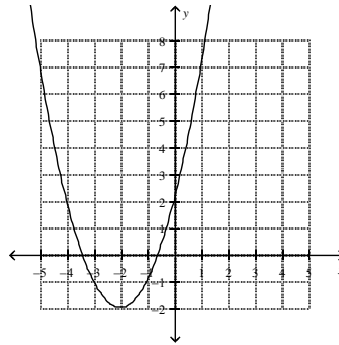
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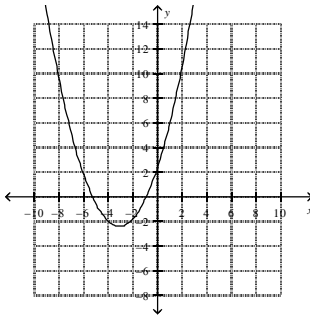


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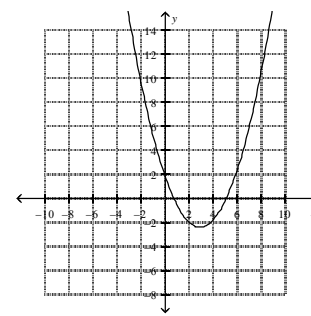


___83. The graph of $y = \left| \frac{1}{2}x^2 - 3x + 2 \right|$ is

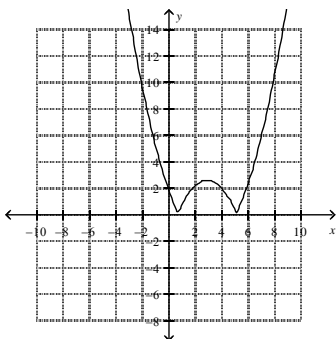
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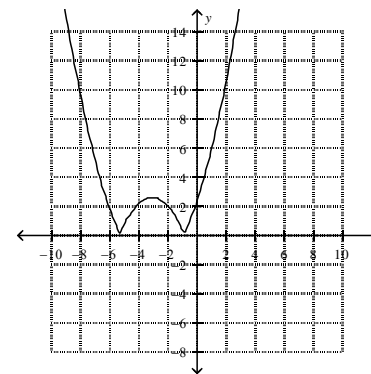
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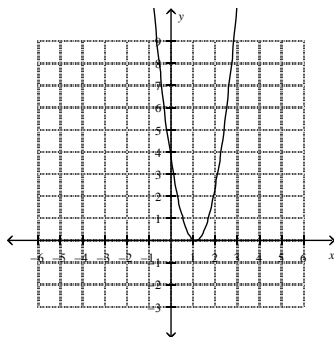
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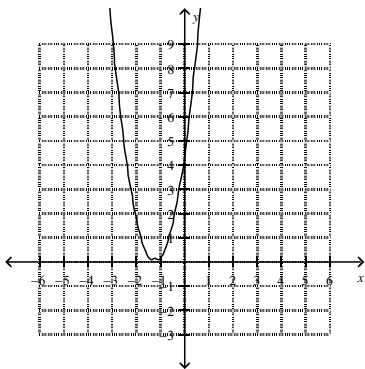
D



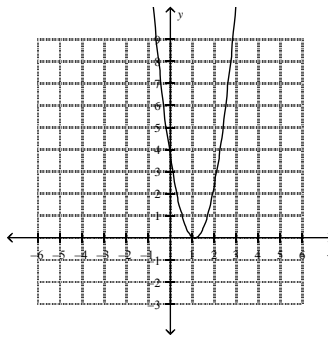
84. Given the graph of $y = f(x)$, which is the graph of $y = |f(x)|$?



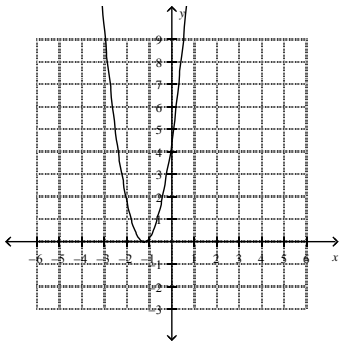
A



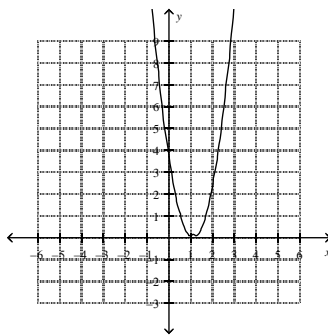
C



B



D



85. Solve $|x + 4| = 7$.

A $x = 3$

C $x = 11$

B $x = 3$ or $x = -11$

D $x = -3$ or $x = 11$

86. Determine the solution to $|6x + 9| + 2 = 8$.

A $x = -\frac{1}{2}$ or $x = -\frac{5}{2}$

C $x = \frac{1}{2}$ or $x = \frac{5}{2}$

B no solution

D $x = \frac{5}{2}$

___87. Determine the solution to $|2x + 8| + 6 = -3$

A $x = -\frac{17}{2}$ or $x = \frac{1}{2}$

B $x = \frac{17}{2}$ or $x = -\frac{1}{2}$

C no solution

D $x = -\frac{1}{2}$

___88. What is the solution to $|4x + 8| = -8x + 3$?

A $x = -\frac{5}{12}$ or $x = \frac{11}{4}$

B $x = \frac{5}{12}$ or $x = \frac{11}{4}$

C $x = \frac{5}{12}$

D $x = -\frac{5}{12}$

___89. Solve $|x^2 - 7| = 3$.

A $x = \sqrt{10}$

B $x = \pm 2$

C $x = \pm\sqrt{10}, x = \pm 2$

D $x = \sqrt{10}, x = 2$

___90. Solve $|x^2 + 3x + 3| = 3x + 7$.

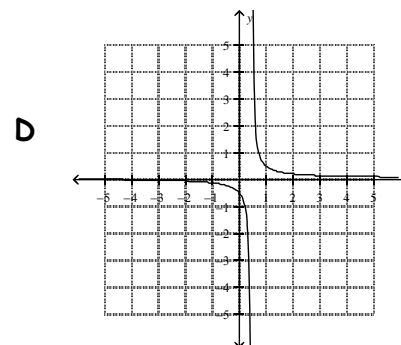
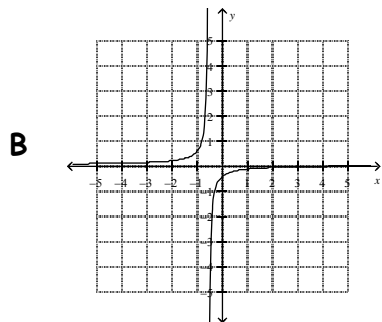
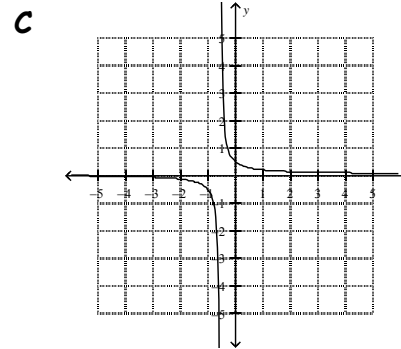
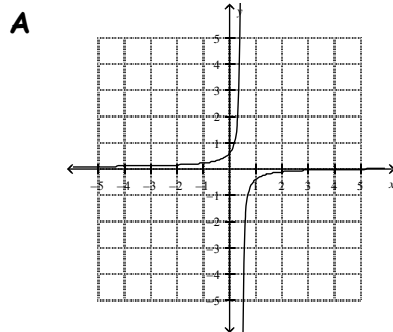
A $x = -2$ and -2

B $x = -2$ and -4

C $x = 2$ and -2

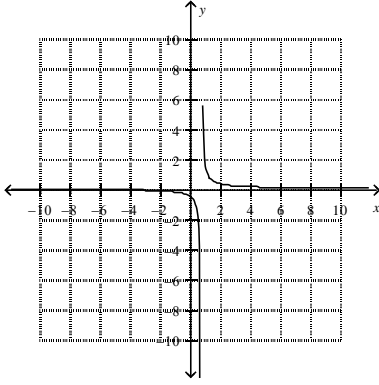
D $x = 2$ and -2

___91. Which graph represents the reciprocal of the linear function $y = 4x - 2$?

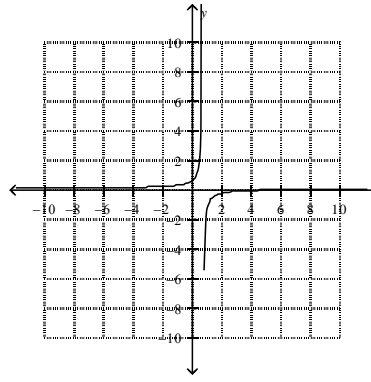


___92. Which graph represents the reciprocal of $y = (5/2)x + 2$?

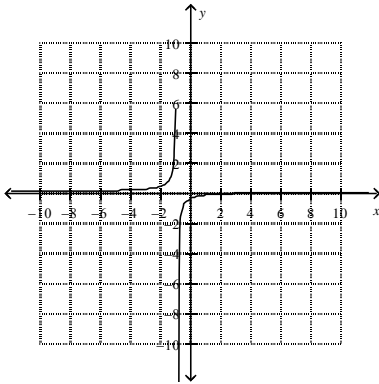
A



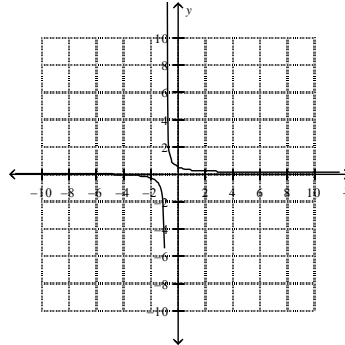
C



B

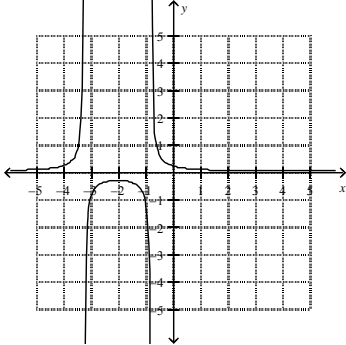


D

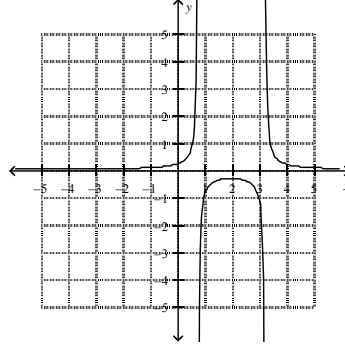


___93. Which graph represents the reciprocal of $y = 2(x + 2)^2 - 3$?

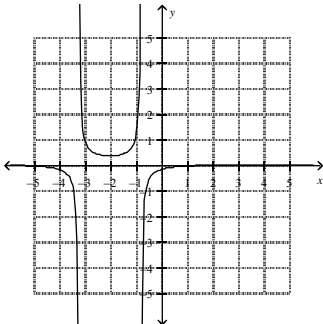
A



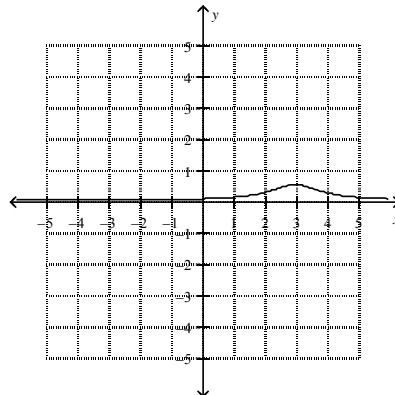
C



B



D



___94. The equation of the vertical asymptote for the reciprocal of $y = 8x - 4$ is

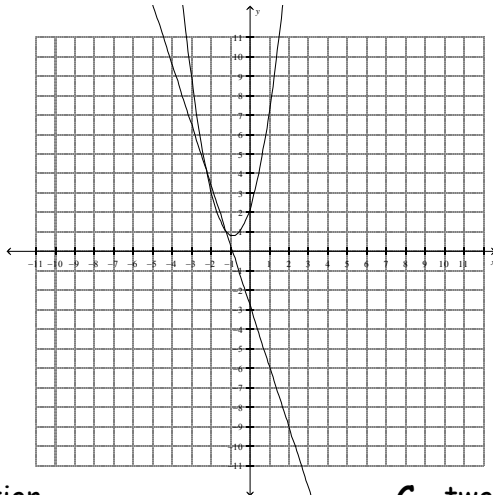
A $x = -\frac{1}{2}$

C $x = \frac{1}{2}$

B $x = 2$

D $x = -2$

___95. How many solutions are there to the system of equations graphed below?



A one solution

C two solutions

B three solutions

D no real solution

___96. The line $y = 9x - 4$ intersects the quadratic function $y = x^2 + 7x - 3$ at one point. What are the coordinates of the point of intersection?

A (0, 0)

C (-1, 5)

B (1, -5)

D (1, 5)

___97. Find the coordinates of the point(s) of intersection of the line $y = 4x + 8$ and the quadratic function $y = -4x^2 - 5x + 8$.

A (0, 8) and $(\frac{9}{4}, 17)$

C (2, -34)

B (0, 0)

D $(-\frac{9}{4}, -1)$ and (0, 8)

___98. Solve the following system:

$$y = -6x + 9$$

$$y = -8x^2 - 9x + 9$$

A $(-\frac{3}{2}, -\frac{27}{2})$

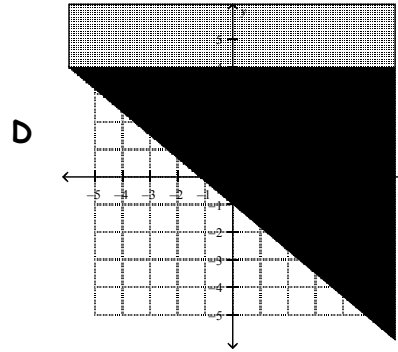
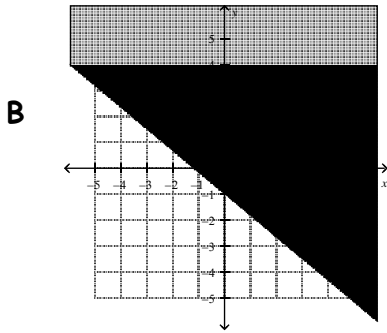
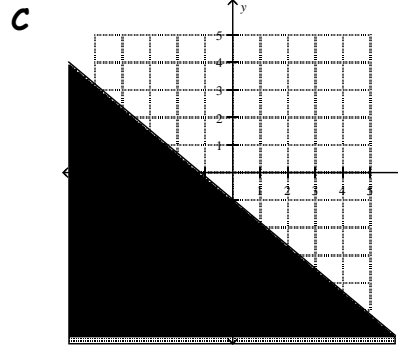
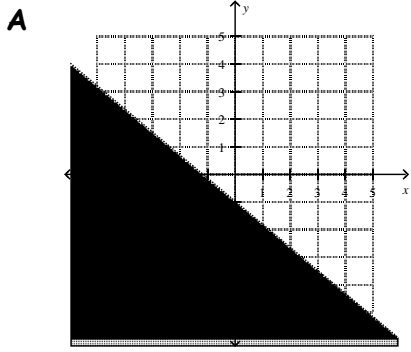
C $(-\frac{3}{8}, \frac{45}{4})$ and (0, 9)

B $(0, \frac{27}{8})$ and $(\frac{3}{8}, \frac{9}{8})$

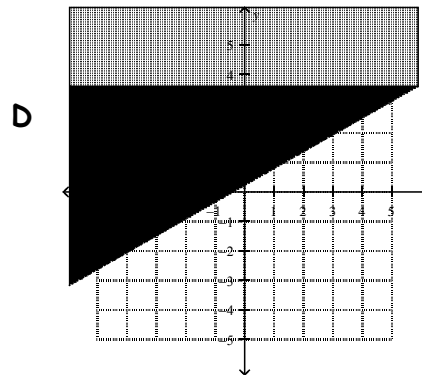
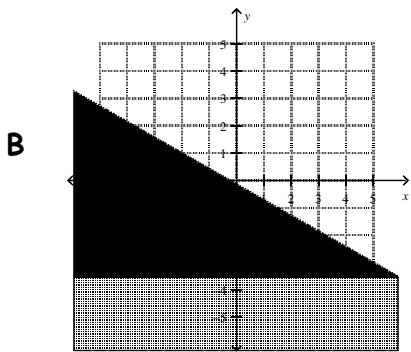
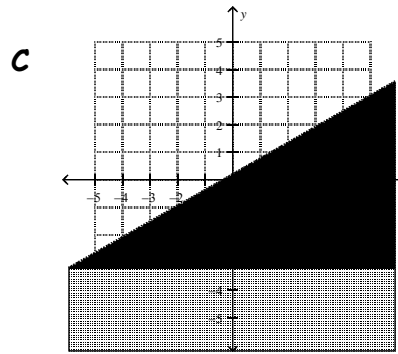
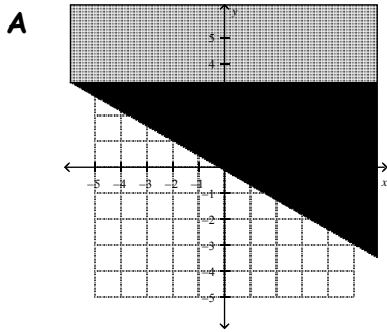
D (0, 0)

- ____99. The line $y = 16x$ intersects the quadratic function $y = x^2$ at two points. What are the coordinates of the two points of intersection?
- A (0,0) and (16,-256) C (0, 0) and (16, 256)
 B (1, 16) and (-16, 256) D (2, 2) and (-16, -256)
- ____100. Solve the following system of equations:
 $y = 4x$
 $y = 2x^2$
- A (0,0) and (2,-8) C (2, 2) and (-2,-8)
 B (2,4) and (-2,8) D (0, 0) and (2, 8)
- ____101. What are the coordinates of the point(s) of intersection of the line $y = -7x - 5$ and the quadratic function $y = -x^2 - 15x + 4$?
- A (9, 58) and (-1, -12) C (9, -58) and (1, 12)
 B (-9, 58), and (1, -12) D (9, -58) and (1, -12)
- ____102. What are the solutions for the following system of equations?
 $y = 8x + 7$
 $y = -x^2 - 5x + 7$
- A (13, 97) and (0, 7) C (13, -97) and (0, 7)
 B (-13, -97) and (0, 7) D (13, 97) and (0, -7)
- ____103. What are the solutions for the following system of equations?
 $y = -2x^2 - 9x - 4$
 $y = 2x^2 - 5x - 4$
- A (-1, 3) and (0, -4) C (1, 3) and (0, -4)
 B (1, -3) and (0, -4) D (1, -3) and (0, 4)
- ____104. What are the coordinates of the point(s) of intersection of the quadratic functions $y = -2x^2 - 4x + 5$ and $y = 2x^2 + 4x + 5$?
- A (-2, 5) and (0, 5) C (2, 5) and (0, 5)
 B (2, -5) and (0, -5) D (2, -5) and (0, 5)

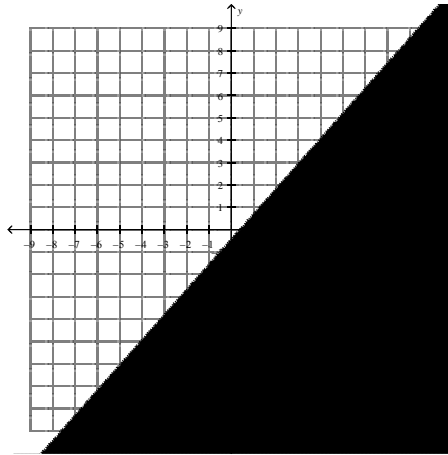
___105. The graph of $-5x - 6y \leq 6$ is



___106. The graph of $-4x + 7y > 1$ is



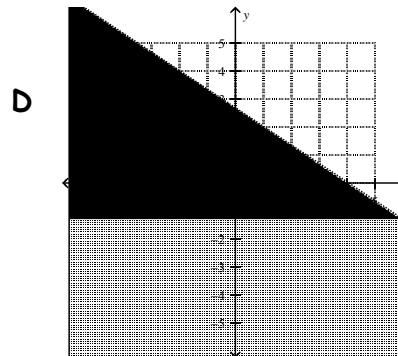
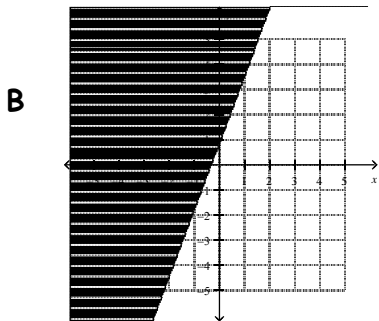
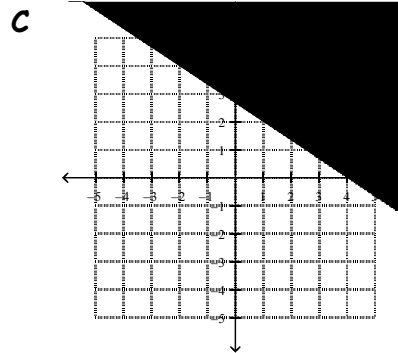
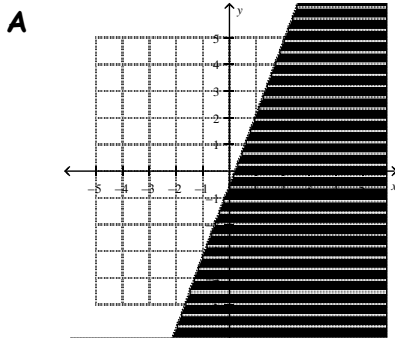
___107. Which inequality represents the graph shown below?



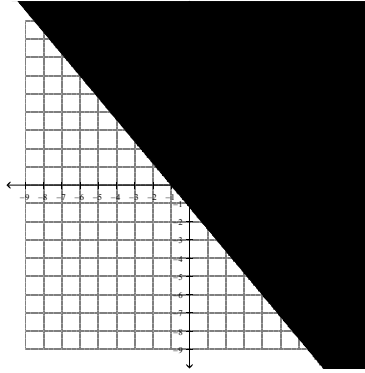
A $y > \frac{8}{9}x - 2$
B $y < \frac{8}{9}x - 2$

C $y > \frac{9}{8}x - \frac{1}{2}$
D $y < \frac{9}{8}x - \frac{1}{2}$

___108. The graphical solution to $y < -\frac{2}{3}x + \frac{8}{3}$ is



___109. Which inequality represents the graph shown below?



A $y > -\frac{5}{6}x - \frac{5}{6}$

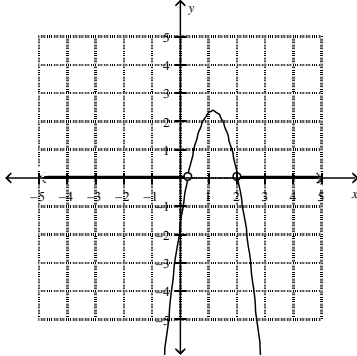
B $y > -\frac{6}{5}x - \frac{6}{5}$

C $y \geq -\frac{6}{5}x - \frac{6}{5}$

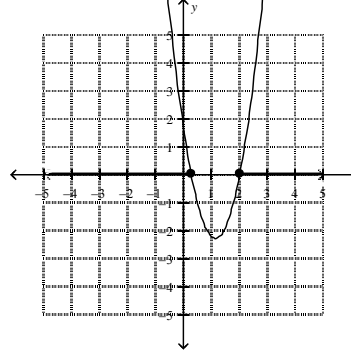
D $y \geq -\frac{5}{6}x - \frac{5}{6}$

___110. Which graph represents the solution to the inequality $3x^2 - 7.2x + 2 < 0$?

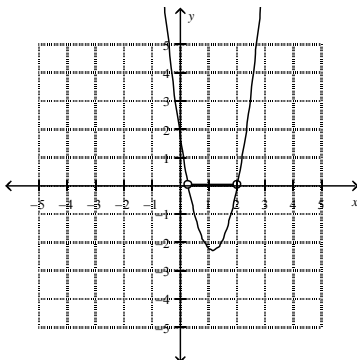
A



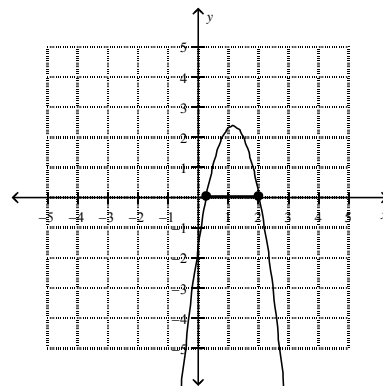
C



B

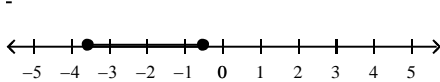


D

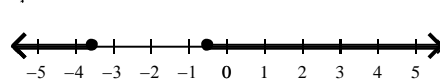


___111. Which number line represents the solution set to the inequality $-2x^2 - 7.9x > 3$?

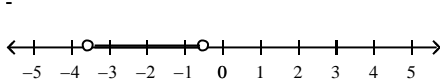
A



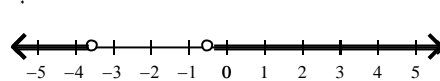
C



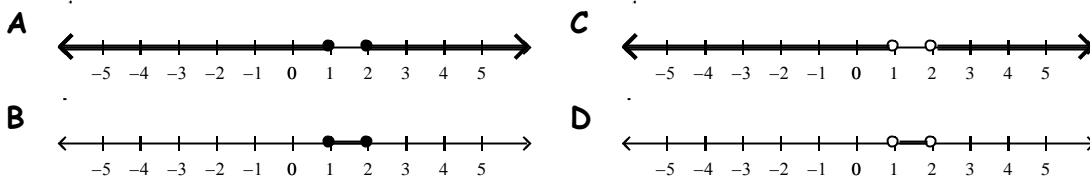
B



D



___112. Which graph represents the solution to the inequality $2x^2 - 6x + 4 \geq 0$?



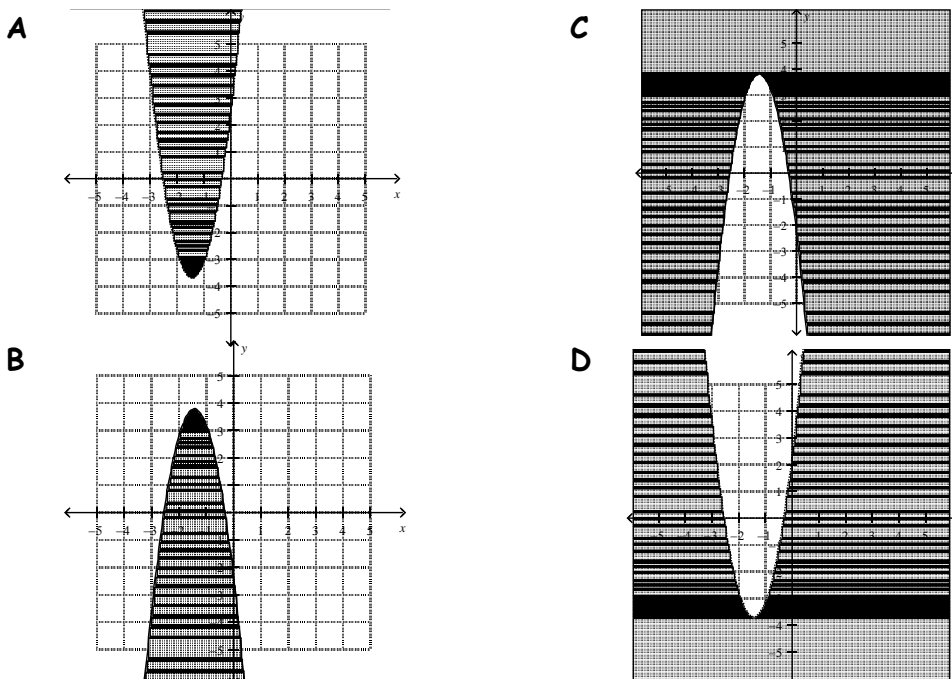
___113. The solution set to the inequality $-2x^2 + 8x - 6 > 0$ is

- A** $\{x \mid 1 < x < 3, x \in \mathcal{R}\}$ **C** $\{x \mid x < 1, x > 3, x \in \mathcal{R}\}$
B $\{x \mid -3 < x < -1, x \in \mathcal{R}\}$ **D** $\{x \mid x < -3, x > -1, x \in \mathcal{R}\}$

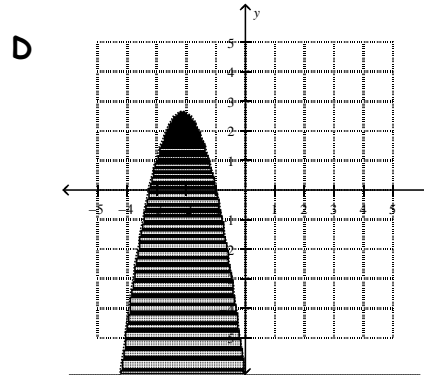
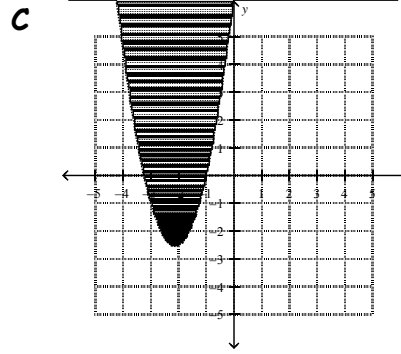
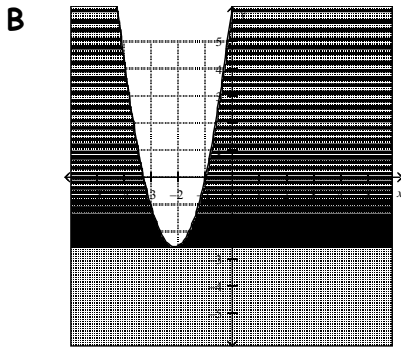
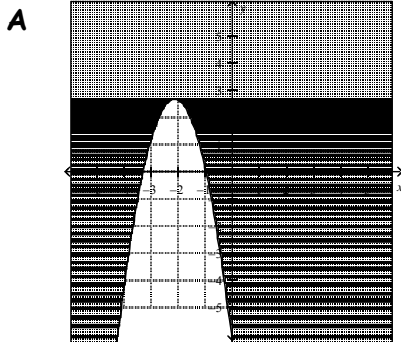
___114. The solution set to the inequality $-3x^2 \leq -9x + 6$ is

- A** $\{x \mid 1 \leq x \leq 2, x \in \mathcal{R}\}$ **C** $\{x \mid x \leq -2 \text{ or } x \geq -1, x \in \mathcal{R}\}$
B $\{x \mid -2 \leq x \leq -1, x \in \mathcal{R}\}$ **D** $\{x \mid x \leq 1 \text{ or } x \geq 2, x \in \mathcal{R}\}$

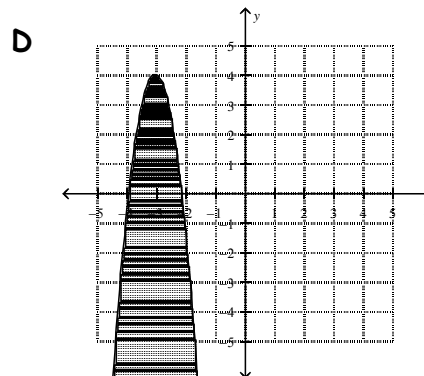
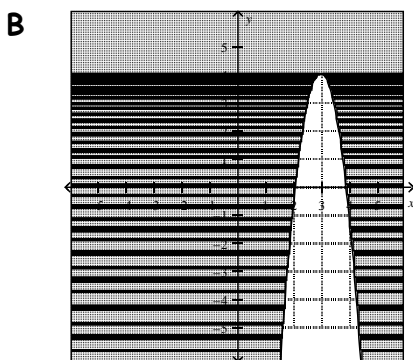
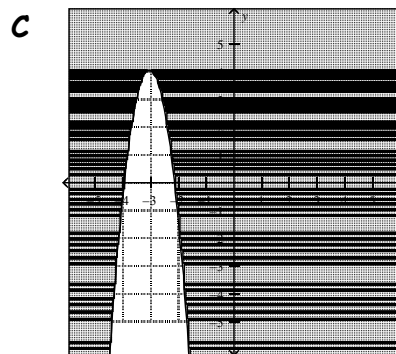
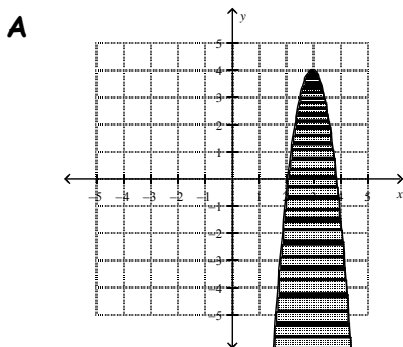
___115. Which graph represents the solution to the inequality $y > 3x^2 + 8.3x + 2$?



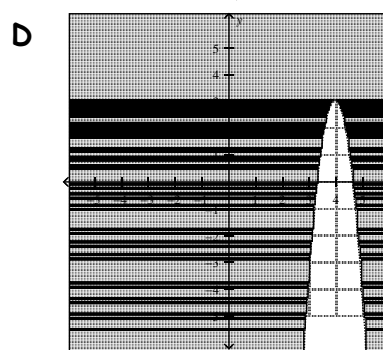
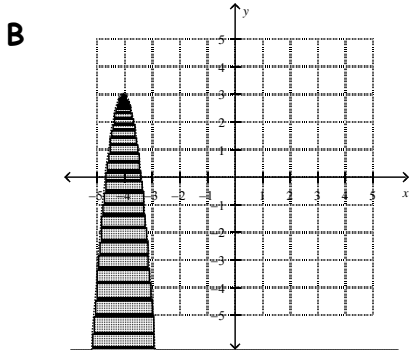
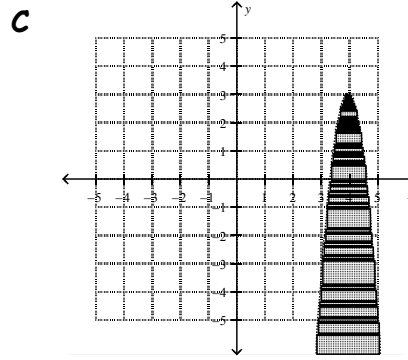
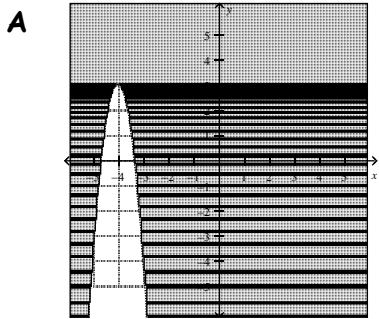
___116. Which graph represents the solution to the inequality $y \geq -2x^2 - 8.3x - 6$?



___117. Which graph represents the solution to the inequality $y \leq -5(x+3)^2 + 4$?



____118. The solution to the inequality $y < -7(x+4)^2 + 3$ is



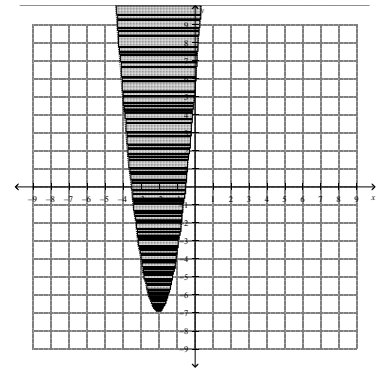
____119. Which quadratic inequality is represented by the graph shown below?

A $y > -3(x+2)^2 - 7$

B $y > 3(x+2)^2 - 7$

C $y > -3(x-7)^2 - 2$

D $y \leq 3(x-7)^2 - 2$



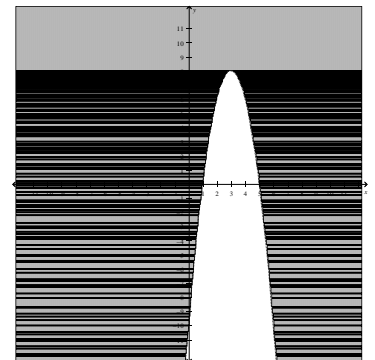
____120. Which point does *not* satisfy the inequality $y > -2(x-3)^2 + 8$?

A $(-9, -234)$

B $(1, 1)$

C $(5, 16)$

D $(2, 0)$



1. ANS: C
2. ANS: A
3. ANS: B
4. ANS: C
5. ANS: A
6. ANS: B
7. ANS: C
8. ANS: A
9. ANS: A
10. ANS: A
11. ANS: D
12. ANS: C
13. ANS: D
14. ANS: A
15. ANS: D
16. ANS: C
17. ANS: D
18. ANS: C
19. ANS: D
20. ANS: C
21. ANS: D
22. ANS: C
23. ANS: B
24. ANS: A
25. ANS: B
26. ANS: C
27. ANS: C
28. ANS: A
29. ANS: C
30. ANS: B
31. ANS: C
32. ANS: B
33. ANS: B
34. ANS: B
35. ANS: A
36. ANS: B
37. ANS: C
38. ANS: D
39. ANS: D
40. ANS: B
41. ANS: B
42. ANS: B
43. ANS: C
44. ANS: D
45. ANS: A
46. ANS: A
47. ANS: C
48. ANS: C
49. ANS: A
50. ANS: C
51. ANS: D
52. ANS: B
53. ANS: C
54. ANS: D
55. ANS: B
56. ANS: B
57. ANS: B
58. ANS: D
59. ANS: C
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61. ANS: C
62. ANS: B
63. ANS: C
64. ANS: B
65. ANS: A
66. ANS: C
67. ANS: B
68. ANS: C
69. ANS: B
70. ANS: B
71. ANS: D
72. ANS: C
73. ANS: D
74. ANS: C
75. ANS: A
76. ANS: A
77. ANS: D
78. ANS: A
79. ANS: B
80. ANS: D
81. ANS: B
82. ANS: C
83. ANS: B
84. ANS: D
85. ANS: B
86. ANS: A
87. ANS: C
88. ANS: D
89. ANS: C
90. ANS: D
91. ANS: D
92. ANS: D
93. ANS: A
94. ANS: C
95. ANS: C
96. ANS: D
97. ANS: D
98. ANS: C
99. ANS: C
100. ANS: D
101. ANS: B
102. ANS: B
103. ANS: A
104. ANS: A
105. ANS: C
106. ANS: D
107. ANS: D
108. ANS: D
109. ANS: C
110. ANS: B
111. ANS: B
112. ANS: A
113. ANS: A
114. ANS: D
115. ANS: A
116. ANS: A
117. ANS: D
118. ANS: B
119. ANS: B
120. ANS: D