هيكل مراجعة أسئلة ضرب ثنائيات الحد



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موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف العاشر العام ⇦ رياضيات ⇦ الفصل الأول ⇦ ملفات متنوعة ⇦ الملف	
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إعداد: Aghead	

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1	الهيكل الوزاري المعتمد 2027 ريفيل
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MINISTRY OF EDUCATION



هيكل رياضيات الصف العاشر عام ريفيل
الفصل الأول للعام 2026-2027

اِحجِزْ مَكانَكَ وَاستَعِدَّ لِلْاِمتِحَانِ بِثِقَةٍ كَامِلَةٍ

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اضغط على الرقم: 0566991363



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شرح الدروس

انضم للقناة

Mr. Aghead

MR. AGHEAD 0566991363

يمكنكم الحصول على



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لا تتردد في التواصل
معنا قم بمسح الـ QR

Q1: multiply binomials by using the foil method

page: 649, (1-6)

MCQ

Find each product.

1. $(3c - 5)(c + 3)$

A) $3c^2 - 4c - 15$
B) $3c^2 + 4c - 15$
C) $3c^2 + 14c - 15$
D) $3c^2 + 4c + 15$

D	C	B	A

2. $(g + 10)(2g - 5)$

A) $2g^2 + 15g - 50$
B) $2g^2 - 15g - 50$
C) $2g^2 + 5g - 50$
D) $2g^2 + 15g + 50$

D	C	B	A

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3. $(6a + 5)(5a + 3)$

A) $30a^2 + 18a + 15$
B) $30a^2 + 33a + 15$
C) $30a^2 + 43a + 15$
D) $11a^2 + 43a + 8$

D	C	B	A

4. $(4x + 1)(6x + 3)$

A) $24x^2 + 18x + 3$
B) $24x^2 + 12x + 3$
C) $24x^2 - 18x + 3$
D) $24x^2 + 18x - 3$

D	C	B	A

5. $(5y - 4)(3y - 1)$

A) $15y^2 + 17y + 4$
B) $15y^2 - 17y - 4$
C) $15y^2 - 7y + 4$
D) $15y^2 - 17y + 4$

D	C	B	A

6. $(6d - 5)(4d - 7)$

A) $24d^2 - 62d - 35$
B) $24d^2 - 62d + 35$
C) $24d^2 + 62d + 35$
D) $24d^2 - 22d + 35$

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

Q2: find squares of sums and differnces

page: 653,655,657, learn + (1-6)

MCQ

Learn Square of a Sum

Key Concept • Square of a Sum

Words The square of $a + b$ is the square of a plus twice the product of a and b plus the square of b.

According to the "Square of a Sum" pattern, the expansion of $(a+b)^2$ is equal to:

A) $a^2 + b^2$

B) $a^2 + ab + b^2$

C) $a^2 + 2ab + b^2$

D) $2a + 2b$

D	C	B	A

Find the product of $(x+3)^2$:

A) $x^2 + 9$

B) $x^2 + 6x + 9$

C) $x^2 + 3x + 9$

D) $x^2 + 6x + 6$

D	C	B	A

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Learn Square of a Difference

Key Concept • Square of a Difference

Words The square of $a - b$ is the square of a minus twice the product of a and b plus the square of b.

A) $a^2 - b^2$
B) $a^2 - 2ab + b^2$
C) $a^2 + 2ab + b^2$
D) $a^2 - 2ab - b^2$

D	C	B	A

Find the product of $(x - 8)^2$:
A) $x^2 - 64$
B) $x^2 - 8x + 64$
C) $x^2 - 16x - 64$
D) $x^2 - 16x + 64$

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

Find each product.

1. $(a + 10)(a + 10)$

A) $a^2 + 100$
B) $a^2 + 20a + 100$
C) $a^2 + 10a + 100$
D) $a^2 + 20a + 20$

D	C	B	A

2. $(b - 6)(b - 6)$

A) $b^2 - 12b + 36$
B) $b^2 - 36$
C) $b^2 + 12b + 36$
D) $b^2 - 12b - 36$

D	C	B	A

3. $(h + 7)^2$

A) $h^2 + 49$
B) $h^2 + 7h + 49$
C) $h^2 + 14h + 49$
D) $h^2 + 14h + 14$

D	C	B	A

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4. $(x + 6)^2$

A) $x^2 + 36$
B) $x^2 + 12x + 36$
C) $x^2 + 6x + 36$
D) $x^2 - 12x + 36$

D	C	B	A

5. $(8 - m)^2$

A) $64 - m^2$
B) $64 - 8m + m^2$
C) $64 + 16m + m^2$
D) $64 - 16m + m^2$

D	C	B	A

6. $(9 - 2y)^2$

A) $81 - 36y + 4y^2$
B) $81 - 4y^2$
C) $81 - 18y + 4y^2$
D) $81 + 36y + 4y^2$

D	C	B	A

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Q3: find the product of sums and differnces

page: 658, (15-20)

MCQ

Find each product.

15. $(u + 3)(u - 3)$

A) $u^2 + 9$
B) $u^2 - 6u - 9$
C) $u^2 - 9$
D) $u^2 - 6$

D	C	B	A

16. $(b + 7)(b - 7)$

A) $b^2 - 49$
B) $b^2 + 49$
C) $b^2 - 14b - 49$
D) $b^2 - 14$

D	C	B	A

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17. $(2 + x)(2 - x)$

A) $4 + x^2$
B) $4 - x^2$
C) $x^2 - 4$
D) $4 - 4x - x^2$

D	C	B	A

18. $(4 - x)(4 + x)$

A) $16 - 8x - x^2$
B) $x^2 - 16$
C) $16 + x^2$
D) $16 - x^2$

D	C	B	A

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19. $(2q + 5r)(2q - 5r)$

A) $4q^2 - 25r^2$
B) $4q^2 + 25r^2$
C) $4q^2 - 20qr - 25r^2$
D) $2q^2 - 5r^2$

D	C	B	A

20. $(3a^2 + 7b)(3a^2 - 7b)$

A) $9a^2 - 49b^2$
B) $9a^4 + 49b^2$
C) $9a^4 - 49b^2$
D) $6a^4 - 14b^2$

D	C	B	A

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Q4: factor polynomials by using the distributive property

page: 665, (1-6)

MCQ

Use the Distributive Property to factor each polynomial.

1. $16t - 40y$

A) $4(4t - 10y)$
B) $8(2t - 5y)$
C) $8(2t + 5y)$
D) $2(8t - 20y)$

D	C	B	A

2. $30v + 50x$

A) $10(3v + 5x)$
B) $5(6v + 10x)$
C) $10(3v - 5x)$
D) $15(2v + 3x)$

D	C	B	A

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3. $2k^2 + 4k$

A) $2(k^2 + 2k)$
B) $2k(k + 4)$
C) $2k(k + 2)$
D) $k(2k + 4)$

D	C	B	A

4. $5z^2 + 10z$

A) $5z(z + 2)$
B) $5(z^2 + 2z)$
C) $5z(z + 5)$
D) $z(5z + 10)$

D	C	B	A

5. $4a^2b^2 + 2a^2b - 10ab^2$

A) $2ab(2ab + a - 5b)$
B) $2ab(2ab + 2a - 5b)$
C) $ab(4ab + 2a - 10b)$
D) $2a(2ab^2 + ab - 5b^2)$

D	C	B	A

6. $5c^2v - 15c^2v^2 + 5c^2v^3$

A) $5c^2v(1 - 3v + v^2)$
B) $5c^2(v - 3v^2 + v^3)$
C) $5c^2v(-3v + v^2)$
D) $5cv(c - 3cv + cv^2)$

D	C	B	A

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Q5: factor trinomials of the form x^2 +bx + c

page: 674, (73-78)

MCQ

73. WHICH ONE DOESN'T BELONG? Which expression does not belong with the others?

$x^2 + 2x - 24$	$x^2 + 11x + 24$	$x^2 - 10x - 24$	$x^2 + 12x + 24$

74. FIND THE ERROR Jamaall and Charles have factored $x^2 + 6x - 16$. Is either of them correct?

Jamaall	Charles
$x^2 + 6x - 16 = (x + 2)(x - 8)$	$x^2 + 6x - 16 = (x - 2)(x + 8)$

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ANALYZE Find all values of k so that each polynomial can be factored using integers.

75. $x^2 + kx - 19$

A) $-18, 18$
B) $-19, 19$
C) $-20, 20$
D) $-10, 10$

D	C	B	A

76. $x^2 + kx + 14$

A) $-13, -8, 8, 13$
B) $-15, -9, 9, 15$
C) $-14, -7, 7, 14$
D) $-15, 15$ only

D	C	B	A

77. $x^2 - 8x + k, k > 0$

A) $7, 12, 15, 16$
B) $1, 2, 4, 8$
C) $8, 16, 24, 32$
D) $3, 5, 7, 9$

D	C	B	A

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78. $x^2 - 5x + k, k > 0$

A) $5, 10$
B) $2, 3$
C) $4, 6$
D) $1, 5$

D	C	B	A

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Q6: factor trinomials of the form ax^2 +bx + c

page: 672, (21-26)

MCQ

Factor each polynomial, if possible. If the polynomial cannot be factored using integers, write *prime*.

21. $5x^2 + 34x + 24$

A) $(5x + 6)(x + 4)$
B) $(5x + 4)(x + 6)$
C) $(5x + 12)(x + 2)$
D) أولية (Prime)

D	C	B	A

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22. $2x^2 + 19x + 24$

A) $(2x + 3)(x + 8)$
B) $(2x + 8)(x + 3)$
C) $(2x + 6)(x + 4)$
D) $(2x + 1)(x + 24)$

D	C	B	A

23. $4x^2 + 22x + 10$

A) $(4x + 2)(x + 5)$
B) $2(2x + 5)(x + 1)$
C) $2(2x + 1)(x + 5)$
D) أولية (Prime)

D	C	B	A

24. $4x^2 + 38x + 70$

A) $2(2x + 7)(x + 5)$
B) $2(2x + 5)(x + 7)$
C) $(4x + 10)(x + 7)$
D) $2(4x + 5)(x + 7)$

D	C	B	A

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25. $2x^2 - 3x - 9$

A) $(2x-3)(x+3)$
B) $(2x+9)(x-1)$
C) $(2x-9)(x+1)$
D) $(2x+3)(x-3)$

D	C	B	A

26. $4x^2 - 13x + 10$

A) $(4x-5)(x-2)$
B) $(4x-2)(x-5)$
C) $(2x-5)(2x-2)$
D) $(4x+5)(x-2)$

D	C	B	A

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Q7: factor binomilas that are the difference of squares

page: 679, (1-6)

MCQ

Factor each polynomial.

1. $q^2 - 121$

A) $(q-11)^2$
B) $(q+11)(q-11)$
C) $(q+11)^2$
D) $(q-121)(q+1)$

D	C	B	A

2. $r^4 - k^4$

A) $(r^2-k^2)^2$
B) $(r^2+k^2)(r-k)^2$
C) $(r^2+k^2)(r+k)(r-k)$
D) $(r+k)^2(r-k)^2$

D	C	B	A

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3. $w^4 - 625$

A) $(w^2 + 25)(w + 5)(w - 5)$

B) $(w^2 - 25)^2$

C) $(w^2 + 25)(w^2 + 25)$

D) $(w + 5)^2(w - 5)^2$

D	C	B	A

4. $r^2 - 9t^2$

A) $(r - 3t)^2$

B) $(r + 9t)(r - 9t)$

C) $(r + 3t)(r - 3t)$

D) $(r - 3t)(r - 3t)$

D	C	B	A

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5. $h^4 - 256$

A) $(h^2 + 16)(h^2 - 16)$
B) $(h^2 + 16)(h + 4)(h - 4)$
C) $(h + 4)^2(h - 4)^2$
D) $(h^2 - 16)^2$

D	C	B	A

6. $2x^3 - x^2 - 162x + 81$

A) $(x + 9)(x - 9)(2x - 1)$
B) $(x^2 - 81)(2x + 1)$
C) $(x + 9)^2(2x - 1)$
D) $(x - 9)^2(2x + 1)$

D	C	B	A

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Q8: divide monomials using the properties of exponets

page: 581,583, learn + (5-9)

MCQ

Key Concept • Power of a Quotient

Words	To find the power of a quotient, find the power of the numerator and the power of the denominator.

According to the "Power of a Quotient" property, for any real numbers a and $b \neq 0$, and any integer m, the expression $\left(\frac{a}{b}\right)^m$ is equal to:

A) $\frac{a \cdot m}{b \cdot m}$

B) $\frac{a^m}{b}$

C) $\frac{a^m}{b^m}$

D) $\frac{a}{b^m}$

D	C	B	A

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Which of the following represents the expression $\left(\frac{c}{d}\right)^6$ using the Power of a Quotient property?

A) $\frac{c^6}{d^6}$

B) $\frac{6c}{6d}$

C) $\frac{c^6}{d}$

D) $\frac{c}{d^6}$

D	C	B	A

Simplify each expression. Assume that no denominator equals zero.

5. $\left(\frac{p^2t^7}{10}\right)^3$

A) $\frac{p^5t^{10}}{30}$

B) $\frac{p^6t^{21}}{1000}$

C) $\frac{p^6t^{21}}{30}$

D) $\frac{p^5t^{21}}{1000}$

D	C	B	A

6. $\frac{a^7b^8c}{a^5bc}$

A) a^2bc^7

B) $a^{12}b^{15}c^9$

C) a^2bc

D) $a^2b^7c^7$

D	C	B	A

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7. $\left(\frac{3np^3}{7q^2}\right)^2$

A) $\frac{6n^2p^6}{14q^4}$
B) $\frac{9np^6}{49q^4}$
C) $\frac{9n^2p^5}{49q^4}$
D) $\frac{9n^2p^6}{49q^4}$

D	C	B	A

8. $\left(\frac{2r^3t^6}{5u^9}\right)^4$

A) $\frac{16r^7t^{10}}{625u^{13}}$
B) $\frac{16r^{12}t^{24}}{625u^{36}}$
C) $\frac{8r^{12}t^{24}}{20u^{36}}$
D) $\frac{16r^{12}t^{24}}{20u^{36}}$

D	C	B	A

9. $\left(\frac{3m^5r^3}{4p^8}\right)^4$

A) $\frac{81m^{20}r^{12}}{256p^{32}}$
B) $\frac{12m^{20}r^{12}}{16p^{32}}$
C) $\frac{81m^9r^7}{256p^{12}}$
D) $\frac{81m^{20}r^{12}}{16p^{32}}$

D	C	B	A

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Q9: simplify expression containing negative and zero exponents

page: 587,591, learn + (11-14)

MCQ

Learn Zero Exponent

Key Concept • Zero Exponent Property	
Words	Any nonzero number raised to the zero power is equal to 1.

What is the value of $\left(\frac{x}{y}\right)^0$ (where $x, y = 0$)?

A) 0

B) $\frac{x}{y}$

C) 1

D) Undefined

D	C	B	A

Simplify each expression. Assume that no denominator equals zero.

11. $\frac{3m^{-3}t^4p^2}{12t^4}$

A) $\frac{p^2}{4m^3}$

B) $\frac{m^3p^2}{4}$

C) $\frac{p^2t^8}{4m^3}$

D) $\frac{4p^2}{m^3}$

D	C	B	A

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12. $\left(\frac{3t^6u^2v^5}{9tuv^{21}}\right)^0$

A) 0
B) $\frac{1}{3}t^5uv^{-16}$
C) 1
D) غير معرّف

D	C	B	A

13. $\frac{xy^{-4}z^9}{z^{-2}}$

A) $\frac{xz^7}{y^4}$
B) $\frac{xz^{11}}{y^4}$
C) $\frac{xy^4}{z^{11}}$
D) xy^4z^{11}

D	C	B	A

14. $-\left(\frac{5f^9g^4h^2}{fg^2h^3}\right)^0$

A) 1
B) 0
C) -1
D) غير معرّف

D	C	B	A

Q10: Evaluate and rewrite expressions involving rational exponents

page: 599, (9-16)

MCQ

Evaluate each expression.

9. $\left(\frac{1}{16}\right)^{\frac{1}{4}}$

$\frac{1}{4}$ (A
$\frac{1}{2}$ (B
$\frac{1}{8}$ (C
2 (D

D	C	B	A

10. $\sqrt[5]{3125}$

5 (A
25 (B
$\frac{1}{5}$ (C
15 (D

D	C	B	A

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11. $729^{\frac{1}{3}}$

3 (A
27 (B
9 (C
81 (D

D	C	B	A

12. $\left(\frac{1}{32}\right)^{\frac{1}{5}}$

$\frac{1}{2}$ (A
$\frac{1}{4}$ (B
$\frac{1}{16}$ (C
2 (D

D	C	B	A

13. $\sqrt[6]{4096}$

2 (A
4 (B
8 (C
16 (D

D	C	B	A

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14. $1024^{\frac{1}{5}}$

8 (A
2 (B
4 (C
16 (D

D	C	B	A

15. $\left(\frac{16}{625}\right)^{\frac{1}{4}}$

$\frac{4}{25}$ (A
$\frac{2}{25}$ (B
$\frac{4}{5}$ (C
$\frac{2}{5}$ (D

D	C	B	A

16. $\sqrt[6]{15,625}$

25 (A
5 (B
15 (C
125 (D

D	C	B	A

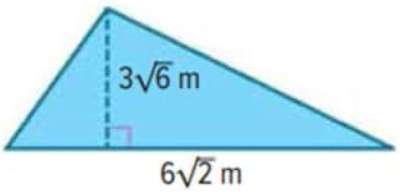
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Q11: Simplify radical expressions by using the Product Property of Square Roots

page: 609, (67-70)

MCQ

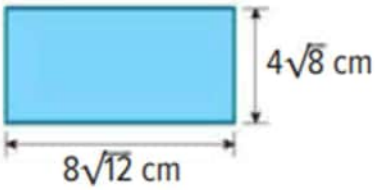
67. AREA The base of a triangle measures $6\sqrt{2}$ meters and the height measures $3\sqrt{6}$ meters. What is the area?



$9\sqrt{3}\ m^2$ (A
$18\sqrt{3}\ m^2$ (B
$36\sqrt{3}\ m^2$ (C
$18\sqrt{12}\ m^2$ (D

D	C	B	A

68. AREA The length of a rectangle measures $8\sqrt{12}$ centimeters and the width measures $4\sqrt{8}$ centimeters. What is the area of the rectangle?



$128\sqrt{6}\ cm^2$ (A
$64\sqrt{6}\ cm^2$ (B
$32\sqrt{96}\ cm^2$ (C
$256\sqrt{3}\ cm^2$ (D

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

69. MEAN The geometric mean of two numbers h and k can be found by evaluating $\sqrt{h \cdot k}$. Find the geometric mean of 32 and 14 in simplified radical form.

$16\sqrt{7}$ (A
$4\sqrt{14}$ (B
$8\sqrt{7}$ (C
$8\sqrt{14}$ (D

D	C	B	A

70. THEATRE CREW Fernanda oversees painting props for a theatre production. She needs to create a cube that will be used as a prop by the actors. She has enough paint to cover 5 square yards. The formula $s = \sqrt{\frac{A}{6}}$ gives the longest side length s in yards of a cubic prop Fernanda can make, where A is the surface area to be covered with paint. What is the longest side length of a cube Fernanda could make and not have to purchase any more paint? Round to the nearest tenth of a yard.

0.8 yard (A
0.9 yard (B
1.2 yards (C
1.0 yard (D

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

Q12: Simplify radical expressions by using the Quotient Property of Square Roots

page: 607, 608, (15-18) + (55 & 56)

MCQ

Simplify each expression.

15. $\sqrt{\frac{192}{216}}$

$\frac{4}{3}$ (A

$\frac{2\sqrt{2}}{3}$ (B

$\frac{4\sqrt{2}}{6}$ (C

$\frac{\sqrt{6}}{3}$ (D

D	C	B	A

16. $\sqrt{\frac{88}{18}}$

$\frac{2\sqrt{11}}{3}$ (A

$\frac{\sqrt{44}}{3}$ (B

$\frac{4\sqrt{11}}{9}$ (C

$\frac{2\sqrt{22}}{3}$ (D

D	C	B	A

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17. $\sqrt{\frac{84}{121}}$

$\frac{4\sqrt{21}}{11}$ (A
$\frac{2\sqrt{21}}{121}$ (B
$\frac{2\sqrt{21}}{11}$ (C
$\frac{\sqrt{84}}{11}$ (D

D	C	B	A

18. $\sqrt{\frac{75}{20}}$

$\frac{5\sqrt{3}}{2}$ (A
$\frac{\sqrt{15}}{4}$ (B
$\frac{3}{2}$ (C
$\frac{\sqrt{15}}{2}$ (D

D	C	B	A

55. $\sqrt[3]{\frac{192x^7}{1029x^{10}}}$

$\frac{4}{7x}$ (A
$\frac{4x}{7}$ (B
$\frac{8}{7x^3}$ (C
$\frac{4}{49x}$ (D

D	C	B	A

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56. $\sqrt[3]{\frac{640a^3b^8}{5ab^4}}$

$4b\sqrt{2a^2b}$ (A

$4ab\sqrt{2b}$ (B

$8b\sqrt{2a^2b}$ (C

$4b^2\sqrt{2a^2}$ (D

D	C	B	A

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Q13: Add and subtract radical expressions
page: 615, (1-8)

MCQ

Simplify.

1. $7\sqrt{7} - 2\sqrt{7}$

A) 5
B) $5\sqrt{7}$
C) $9\sqrt{7}$
D) $5\sqrt{14}$

D	C	B	A

2. $3\sqrt{13} + 7\sqrt{13}$

A) $10\sqrt{13}$
B) $10\sqrt{26}$
C) $21\sqrt{13}$
D) $4\sqrt{13}$

D	C	B	A

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3. $7\sqrt{5} + 4\sqrt{5}$

A) $11\sqrt{10}$
B) $28\sqrt{5}$
C) $11\sqrt{5}$
D) $3\sqrt{5}$

D	C	B	A

4. $2\sqrt{6} + 9\sqrt{6}$

A) $11\sqrt{12}$
B) $18\sqrt{6}$
C) $7\sqrt{6}$
D) $11\sqrt{6}$

D	C	B	A

5. $12\sqrt{r} - 9\sqrt{r}$

A) 3
B) $3\sqrt{r}$
C) $21\sqrt{r}$
D) $3r$

D	C	B	A

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6. $9\sqrt{6a} - 11\sqrt{6a} + 4\sqrt{6a}$

A) $2\sqrt{6a}$
B) $-2\sqrt{6a}$
C) $6\sqrt{6a}$
D) $2\sqrt{18a}$

D	C	B	A

7. $3\sqrt{5} - 2\sqrt{20}$

A) $\sqrt{5}$
B) $-\sqrt{5}$
C) $-7\sqrt{5}$
D) $\sqrt{-15}$

D	C	B	A

8. $3\sqrt{50} - 3\sqrt{32}$

A) $6\sqrt{2}$
B) $3\sqrt{18}$
C) $3\sqrt{2}$
D) $-3\sqrt{2}$

D	C	B	A

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Q14: Solve quadratic equations by factoring

page: 722, (29 & 30)

MCQ

29. FREE FALL The function $f(t) = -16t^2 + 576$ represents the height of a freely falling ballast bag that was accidentally dropped from a hot-air balloon 576 feet above the ground. After how many seconds t does the ballast bag hit the ground?

4 seconds (A
6 seconds (B
12 seconds (C
36 seconds (D

D	C	B	A

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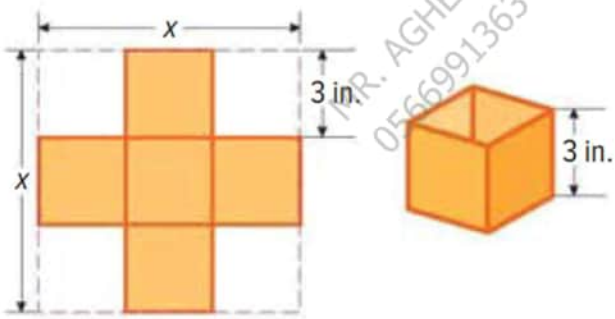
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30. VOLUME Catalina can make an open-topped box out of a square piece of cardboard by cutting 3-inch squares from the corners and folding up the sides to meet. The volume of the resulting box is $V = 3x^2 - 36x + 108$, where x is the original length and width of the cardboard.



a. Factor the polynomial expression from the volume equation.

$3(x-6)^2$ (A
$(3x-18)(x-6)$ (B
$3(x+6)^2$ (C
$3(x-6)(x+6)$ (D

D	C	B	A

b. What is the volume of the box if the original length of each side of the cardboard was 9 inches?

$81\ \text{in}^3$ (A
$54\ \text{in}^3$ (B
$27\ \text{in}^3$ (C
$9\ \text{in}^3$ (D

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

Q15: Solve quadratic equations by using the Square Root Property / Solve quadratic equations by completing the square

page: 730, 725, (37-39) + learn

MCQ

Learn Solving Quadratic Equations by Completing the Square

To complete the square for a quadratic expression in the form $x^2 + bx$, which term must be added to $x^2 + bx$?

A) $\frac{b}{2}$
B) b^2
C) $\left(\frac{b}{2}\right)^2$
D) $2b^2$

D	C	B	A

the expression $x^2 + bx + \left(\frac{b}{2}\right)^2$ factors into:

A) $\left(x + \frac{b}{2}\right)^2$
B) $(x + b)^2$
C) $\left(x - \frac{b}{2}\right)^2$
D) $(x + 2b)^2$

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

للتواصل اضغط الرقم:
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37. WHICH ONE DOESN'T BELONG? Identify the expression that does not belong with the other three. Explain your reasoning.

$n^2 - n + \frac{1}{4}$ | $n^2 + n + \frac{1}{4}$ | $n^2 - \frac{2}{3}n + \frac{1}{9}$ | $n^2 + n\frac{1}{3} + \frac{1}{9}$

38. CREATE Write a quadratic equation for which the only solution is 4.

$x^2 - 16 = 0$ (A

$x^2 - 8x + 16 = 0$ (B

$x^2 + 8x + 16 = 0$ (C

$x^2 - 4x + 16 = 0$ (D

D	C	B	A

39. WRITE Compare and contrast the following strategies for solving $x^2 - 5x - 7 = 0$: completing the square, graphing, and factoring.

A) The equation can be easily solved by factoring using integers.

B) Because the leading coefficient is 1, completing the square is simpler; graphing allows estimating the solution, while factoring is not possible.

C) Graphing always gives exact algebraic solutions without estimation.

D) Completing the square cannot be used because the linear coefficient is odd.

D	C	B	A

للتواصل اضغط الرقم: 0566991363

احصل على الشرح كاملاً بـ 149 درهم فقط

Q16: Write a quadratic function in the form y = a(x - h)^2 + k / Transform graphs of quadratic functions of the form y = a(x - h)^2 + k
page: 699, 707, learn + (3-10)

MCQ

Learn Translations of Quadratic Functions

For the quadratic function $g(x) = x^2 + k$, if $k > 0$, the graph of $f(x) = x^2$ is translated vertically:

A) k units down

B) k units to the right

C) k units up

D) k units to the left

D	C	B	A

If the graph of $g(x) = x^2 + k$ represents a vertical translation of $f(x) = x^2$ by $|k|$ units down, then:

A) $k > 0$

B) $k < 0$

C) $k = 0$

D) $k \geq 1$

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

Describe the translation in each function as it relates to the graph of the parent function.

3. $g(x) = (x - 1)^2$

A) translated left 1 unit
B) translated right 1 unit
C) translated up 1 unit
D) translated down 1 unit

D	C	B	A

4. $g(x) = x^2 - 8$

A) translated down 8 units
B) translated up 8 units
C) translated right 8 units
D) translated left 8 units

D	C	B	A

5. $g(x) = (x + 3)^2$

A) translated right 3 units
B) translated up 3 units
C) translated left 3 units
D) translated down 3 units

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

6. $g(x) = x^2 + 7$

A) translated down 7 units
B) translated left 7 units
C) translated right 7 units
D) translated up 7 units

D	C	B	A

7. $g(x) = (x + 2.5)^2$

A) translated right 2.5 units
B) translated left 2.5 units
C) translated up 2.5 units
D) translated down 2.5 units

D	C	B	A

8. $g(x) = (x + 5)^2 - 2$

A) translated right 5 units and down 2 units
B) translated left 5 units and up 2 units
C) translated left 5 units and down 2 units
D) translated right 5 units and up 2 units

D	C	B	A

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9. $g(x) = 6 + x^2$

A) translated up 6 units
B) translated down 6 units
C) translated right 6 units
D) translated left 6 units

D	C	B	A

10. $g(x) = -4 + (x - 3)^2$

A) translated left 3 units and down 4 units
B) translated right 3 units and up 4 units
C) translated left 3 units and up 4 units
D) translated right 3 units and down 4 units

D	C	B	A

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Q18: Write a quadratic function in the form y = a(x - h)^2 + k / Transform graphs of quadratic functions of the form y = a(x - h)^2 + k

page: 703 & 704, 707 & 708, learn + (23-30)

MCQ

Learn Reflections of Quadratic Functions

The graph of $-f(x)$ is the reflection of the graph of $f(x) = x^2$ across the:

A) y-axis

B) x-axis

C) origin

D) line $y = x$

D	C	B	A

The graph of $f(-x)$ is the reflection of the graph of $f(x) = x^2$ across the:

A) y-axis

B) x-axis

C) line $y = -x$

D) origin

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

Which of the following functions represents a reflection of the graph of $f(x) = x^2$ across the x-axis?

A) $g(x) = (-x)^2$

B) $g(x) = x^2 - 1$

C) $g(x) = -x^2$

D) $g(x) = -(x-1)^2$

D	C	B	A

Which geometric transformation maps the parent function $f(x) = x^2$ onto $g(x) = (-x)^2$?

A) reflection across the x-axis

B) reflection across the y-axis

C) vertical translation down

D) horizontal translation left

D	C	B	A

Learn Transformations of Quadratic Functions

A quadratic function written in the form $f(x) = a(x-h)^2 + k$ is in:

A) standard form

B) vertex form

C) intercept form

D) factored form

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

In the function $f(x) = a(x-h)^2 + k$, which value stretches or compresses (dilates) the parent graph?

A) $|a|$

B) h

C) k

D) $h + k$

D	C	B	A

When the value of a is negative in $f(x) = a(x-h)^2 + k$, the parent graph is:

A) reflected across the y-axis

B) reflected across the x-axis

C) shifted down

D) shifted left

D	C	B	A

In the vertex form of a quadratic function, the value of k shifts (translates) the parent graph:

A) left or right

B) up or down

C) diagonally

D) across the origin

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

Describe how the graph of each function is related to the graph of the parent function.

23. $g(x) = -\frac{1}{3}x^2$

A) stretched vertically and reflected across the x-axis
B) compressed vertically and reflected across the x-axis
C) stretched horizontally and reflected across the y-axis
D) compressed horizontally and reflected across the y-axis

D	C	B	A

24. $g(x) = \left(-\frac{2}{3}x\right)^2$

A) stretched horizontally and reflected across the y-axis
B) compressed horizontally and reflected across the y-axis
C) stretched vertically and reflected across the x-axis
D) compressed vertically and reflected across the x-axis

D	C	B	A

25. $g(x) = -2x^2$

A) compressed vertically and reflected across the x-axis
B) stretched horizontally and reflected across the y-axis
C) stretched vertically and reflected across the x-axis
D) compressed horizontally and reflected across the x-axis

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

26. $g(x) = \left(-\frac{6}{5}x\right)^2$

A) stretched horizontally and reflected across the y-axis
B) compressed vertically and reflected across the x-axis
C) stretched vertically and reflected across the x-axis
D) compressed horizontally and reflected across the y-axis

D	C	B	A

27. $h(x) = -7 - x^2$

A) reflected across the x-axis and translated down 7 units
B) reflected across the x-axis and translated up 7 units
C) reflected across the y-axis and translated down 7 units
D) reflected across the y-axis and translated right 7 units

D	C	B	A

28. $g(x) = 2(x - 3)^2 + 8$

A) translated left 3 units and up 8 units and compressed vertically
B) translated right 3 units and up 8 units and stretched vertically
C) translated right 3 units and down 8 units and stretched vertically
D) translated left 3 units and down 8 units and compressed horizontally

D	C	B	A

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احصل على الشرح كاملاً بـ 149 درهم فقط

29. $h(x) = 6 + \frac{2}{3}x^2$

A) stretched vertically and translated up 6 units
B) compressed vertically and translated down 6 units
C) compressed vertically and translated up 6 units
D) stretched horizontally and translated right 6 units

D	C	B	A

30. $g(x) = -5 - \frac{4}{3}x^2$

A) reflected across the x-axis, stretched vertically, and translated down 5 units
B) reflected across the x-axis, compressed vertically, and translated up 5 units
C) reflected across the y-axis, stretched vertically, and translated down 5 units
D) reflected across the x-axis, compressed vertically, and translated down 5 units

D	C	B	A

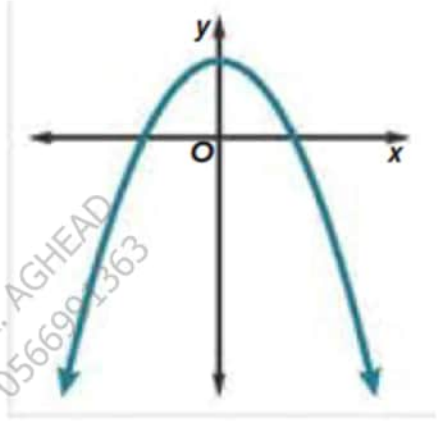
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Q19: Solve quadratic equations by graphing

page: 711, 713, learn + (1-6)

MCQ

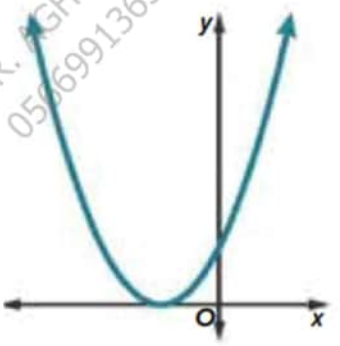
Learn Solving Quadratic Equations by Graphing



A) no real solutions
B) one unique real solution
C) two unique real solutions
D) infinitely many solutions

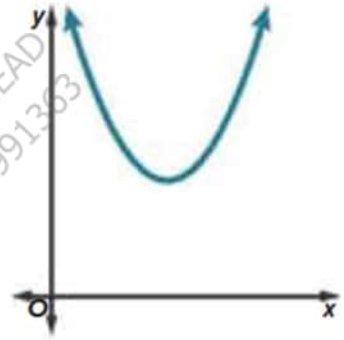
D	C	B	A

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A) one unique real solution
B) two unique real solutions
C) no real solutions
D) three real solutions

D	C	B	A



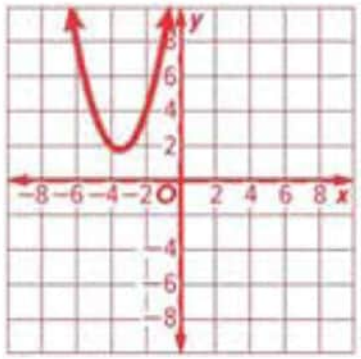
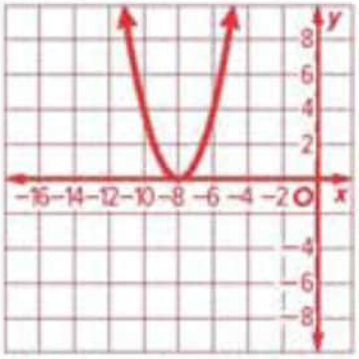
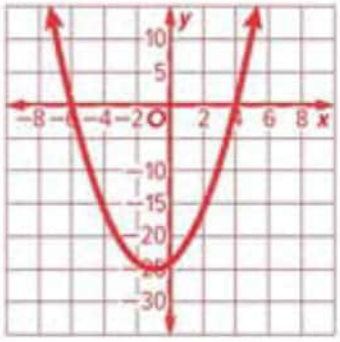
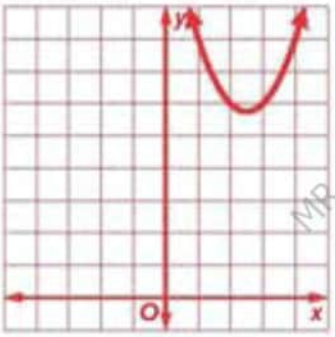
A) one unique real solution
B) two unique real solutions
C) no real solutions
D) two rational solutions

D	C	B	A

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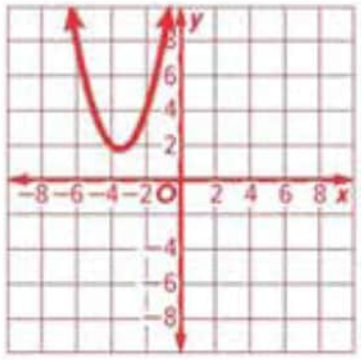
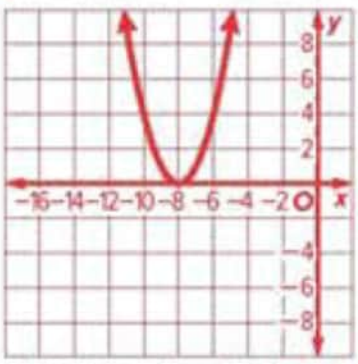
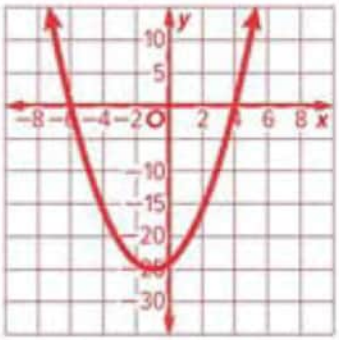
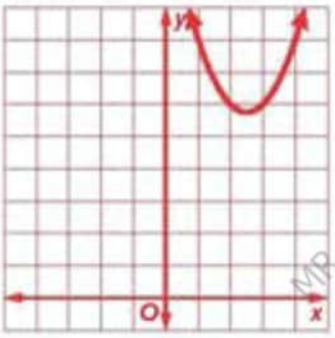
Solve each equation by graphing.

1. $x^2 + 7x + 14 = 0$

no solutions 	−8 
4, −6 	no solutions 

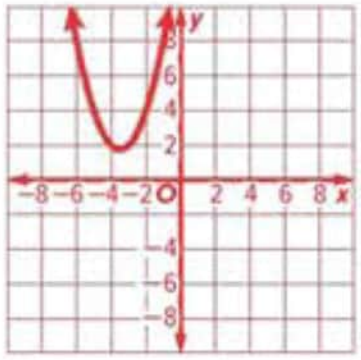
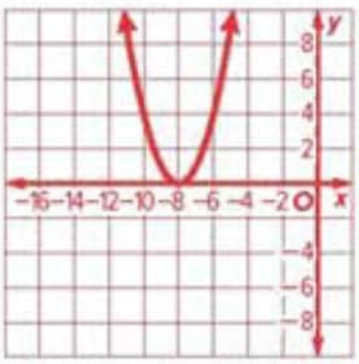
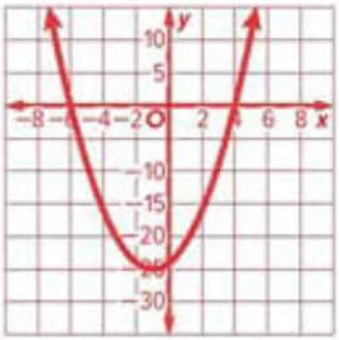
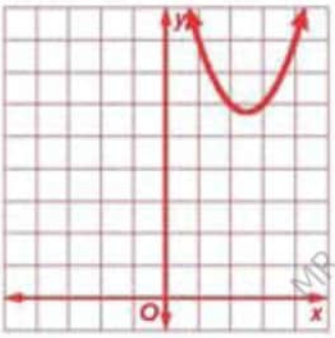
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2. $x^2 + 2x - 24 = 0$

no solutions 	−8 
4, −6 	no solutions 

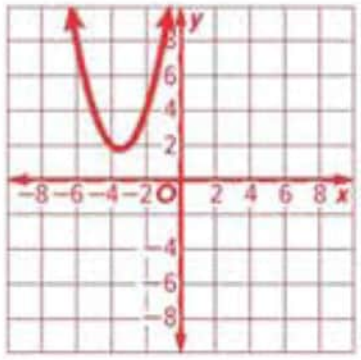
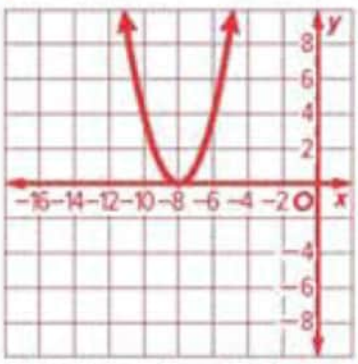
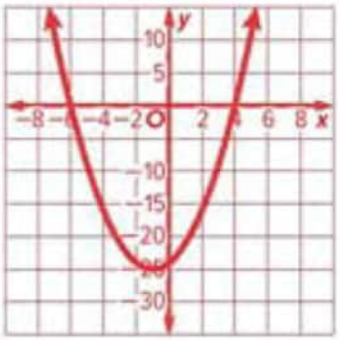
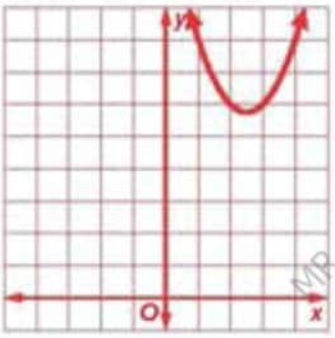
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3. $x^2 + 16x + 64 = 0$

no solutions 	-8 
$4, -6$ 	no solutions 

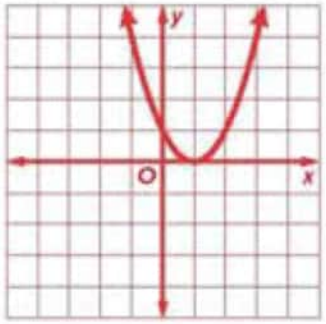
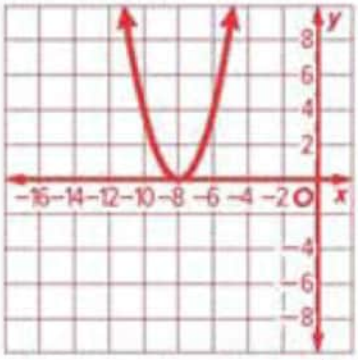
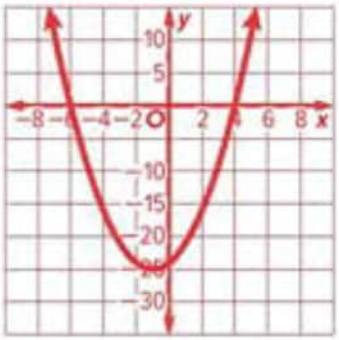
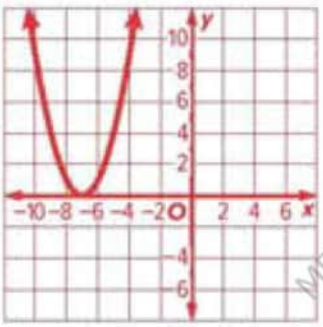
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4. $x^2 - 5x + 12 = 0$

no solutions 	−8 
4, −6 	no solutions 

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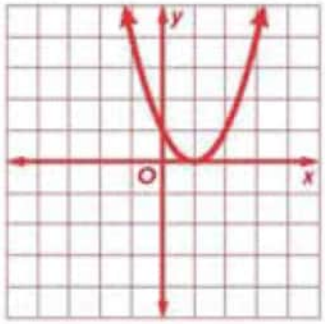
5. $x^2 + 14x = -49$

.1 	−8 
4, −6 	−7 

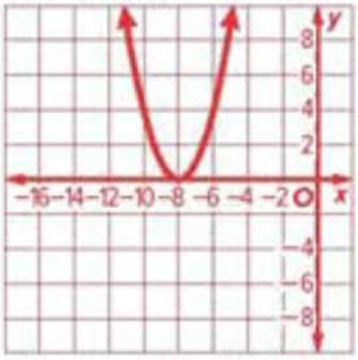
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6. $x \stackrel{?}{=} 2x - 1$

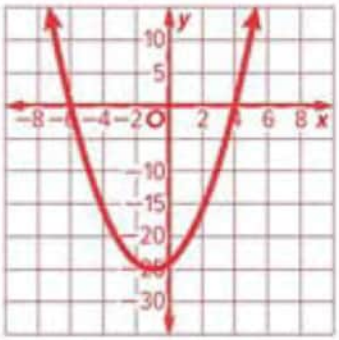
.1



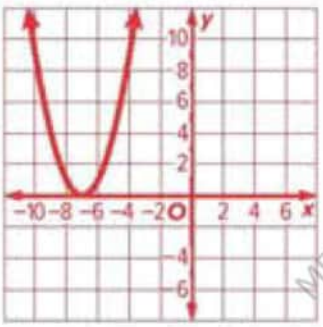
−8



4, −6



−7



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Q20: Solve quadratic equations by completing the square
page: 729, (1-6)

MCQ

Find the value of c that makes each trinomial a perfect square.

1. $x^2 + 26x + c$

13 (A
52 (B
169 (C
676 (D

D	C	B	A

2. $x^2 - 24x + c$

144 (A
-144 (B
12 (C
48 (D

D	C	B	A

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3. $x^2 - 19x + c$

$\frac{19}{2}$ (A
$\frac{361}{4}$ (B
$\frac{361}{2}$ (C
$-\frac{361}{4}$ (D

D	C	B	A

4. $x^2 + 17x + c$

$\frac{289}{4}$ (A
$\frac{17}{4}$ (B
$\frac{289}{2}$ (C
289 (D

D	C	B	A

5. $x^2 + 5x + c$

$\frac{5}{2}$ (A
$\frac{25}{2}$ (B
25 (C
$\frac{25}{4}$ (D

D	C	B	A

6. $x^2 - 13x + c$

$-\frac{169}{4}$ (A
$\frac{169}{4}$ (B
$\frac{13}{2}$ (C
$\frac{169}{2}$ (D

D	C	B	A

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Q21: Add and subtract polynomials
page: 636, (27-34)

FRQ

Find each sum or difference.

27. $(3c^3 - c + 11) - (c^2 + 2c + 8)$

28. $(z^2 + z) + (z^2 - 11)$

29. $(2x - 2y + 1) - (3y + 4x)$

30. $(4a - 5b^2 + 3) + (6 - 2a + 3b)^2$

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31. $(x^2y - 3x^2y) + (3y - 2xy)^2$

32. $(-8xy + 3x^2 - 5y) + (4x^2 - 2y + 6xy)$

33. $(5n - 2p^2 + 2np) - (4p^2 + 4n)$

34. $(4rxt - 8r^2x + x)^2 - (6rx^2 + 5rxt - 2x)^2$

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Q22: Multiply polynomials by using the Distributive Property
page: 650, (18-23)

FRQ

Find each product.

18. $(2y - 11)(y^2 - 3y + 2)$

19. $(4a + 7)(9a^2 + 2a - 7)$

20. $(m^2 - 5m + 4)(m^2 + 7m - 3)$

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21. $(x^2 + 5x - 1)(5x^2 - 6x + 1)$

22. $(3b^3 - 4b - 7)(2b^2 - b - 9)$

23. $(6z^2 - 5z - 2)(3z^3 - 2z - 4)$

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Q23: Multiply monomials using the properties of exponents / Simplify expressions using the multiplication properties of exponents

page: 576, 578, (25-30) + (56-58)

FRQ

25. FIELDS A field is in the shape of a square. The length of the field is $5x^3y^5$. What is the area of the field in terms of x and y?

26. PICTURE FRAME Michelle is purchasing a new picture frame to hang in her bedroom. The picture frame is square shaped. What is the area of the interior of the picture frame in terms of c and d?



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27. SHIPPING A shipping box is in the shape of a cube. What is the volume of the shipping box in terms of m and n?



Simplify each expression.

28. $(2a^3)^4(a^3)^3$

29. $(c^3)^2(-3c^5)^2$

30. $(2gh^4)^3[(-2g^4h)^3]^2$

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56. STATE YOUR ASSUMPTION Consider the expressions $(m^p)(m^q)$ and $(m^p)^q$.

a. What must be true about p and q for $(m^p)(m^q) = (m^p)^q$? Give an example.

b. Assuming m, p, and q are all positive integers, can $(m^p)(m^q) > (m^p)^q$ ever be true? Explain.

57. PERSEVERE For any nonzero real numbers a and b and any integers m and t, simplify the expression $\left(\frac{-a^m}{b^t}\right)^{2t}$. Explain.

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58. ANALYZE Consider the equations in the table.

a. For each equation, copy and complete the table to write the related expression and record the power of x.

Equation	Related Expression	Power of x	Linear or Nonlinear
$y = x$			
$y = x^2$			
$y = x^3$			

b. Graph each equation using a graphing calculator.

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c. Classify each graph as *linear* or *nonlinear*.

d. Explain how to determine whether an equation, or its related expression, is linear or nonlinear without graphing.

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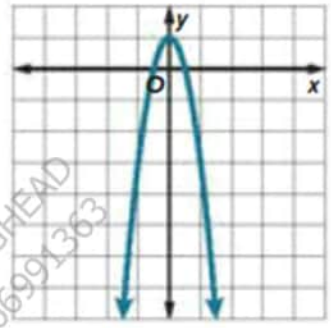
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Q24: Find and interpret the maximum and minimum values of a quadratic function
page: 695, (1-4)

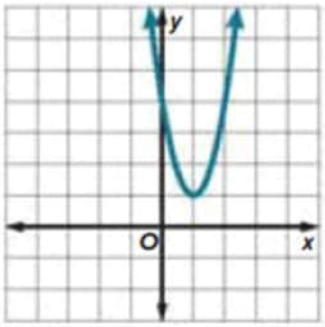
FRQ

Identify the axis of symmetry, the vertex, and the *y*-intercept of each graph. Then describe the end behavior.

1.



2.

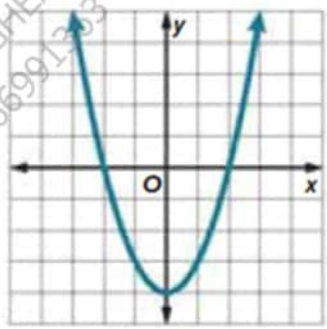


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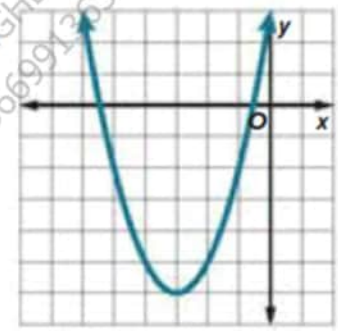
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3.



4.



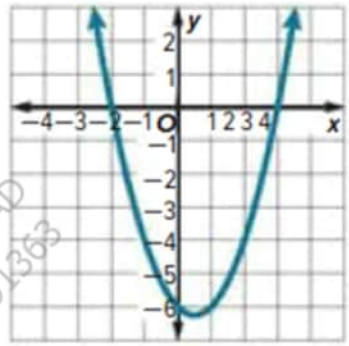
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Q25: Write quadratic equations using the Standard Form
page: 722, (31-34)

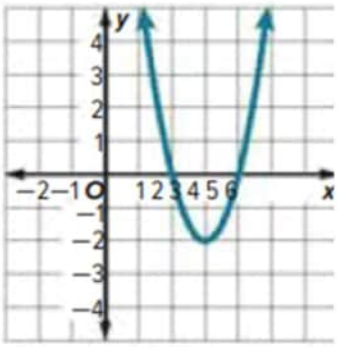
FRQ

Write a quadratic function for the given graph.

31.

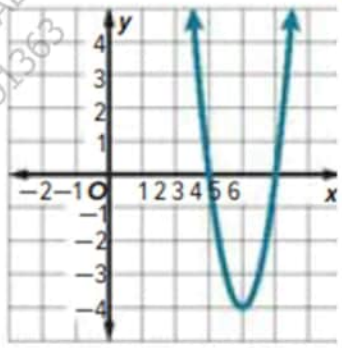


32.

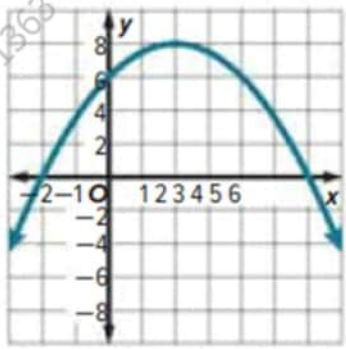


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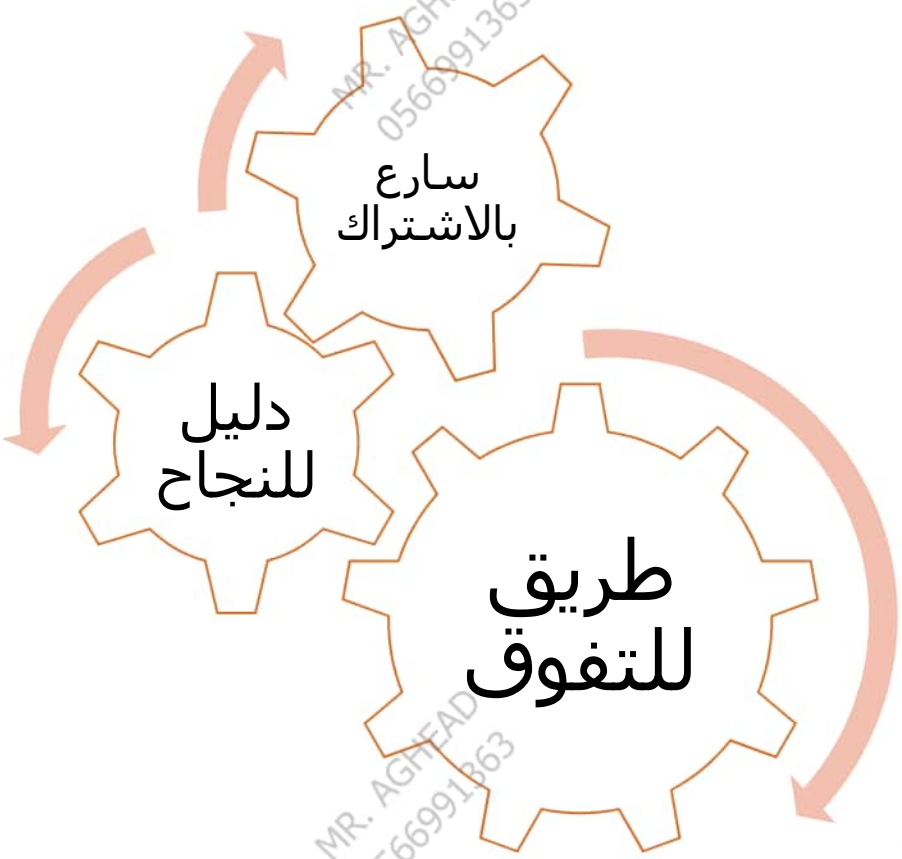
33.



34.



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