SAT Math

Equivalent Expressions 2

Question # **ID**

2.1 dd4ab4c4

$4a^2+20ab+25b^2$

Which of the following is a factor of the polynomial above?

A. $a+b$

B. $2a+5b$

C. $4a+5b$

D. $4a+25b$

2.2 b8caaf84

If $p=3x+4$ and $v=x+5$, which of the following is equivalent to $pv-2p+v$?

A. $3x^2+12x+7$

B. $3x^2+14x+17$

C. $3x^2+19x+20$

D. $3x^2+26x+33$

2.3 ad2ec615

Which of the following is equivalent to the expression x^4-x^2-6 ?

A. $(x^2+1)(x^2-6)$

B. $(x^2+2)(x^2-3)$

C. $(x^2+3)(x^2-2)$

D. $(x^2+6)(x^2-1)$

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2.4 42c71eb5

$(2x+5)^2-(x-2)+2(x+3)$

Which of the following is equivalent to the expression above?

A. $4x^2+21x+33$

B. $4x^2+21x+29$

C. $4x^2+x+29$

D. $4x^2+x+33$

2.5 a05bd3a4

Which of the following expressions is equivalent to x^2-5?

A. $(x+\sqrt{5})^2$

B. $(x-\sqrt{5})^2$

C. $(x+\sqrt{5})(x-\sqrt{5})$

D. $(x+5)(x-1)$

2.6 cc776a04

Which of the following is an equivalent form of $(1.5x-2.4)^2-(5.2x^2-6.4)$?

A. $-2.2x^2+1.6$

B. $-2.2x^2+11.2$

C. $-2.95x^2-7.2x+12.16$

D. $-2.95x^2-7.2x+0.64$

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Question #	ID

2.7 a520ba07

$\sqrt[3]{x^3y^5}$

Which of the following expressions is equivalent to the expression above?

A. y^2

B. xy^2

C. y^3

D. xy^3

2.8 5b6af6b1

Which expression is equivalent to $(d-6)(8d^2-3)$?

A. $8d^3-14d^2-3d+18$

B. $8d^3-17d^2+48$

C. $8d^3-48d^2-3d+18$

D. $8d^3-51d^2+48$

2.9 a255ae72

If $x^2=a+b$ and $y^2=a+c$, which of the following is equal to $(x^2-y^2)^2$?

A. $a^2-2ac+c^2$

B. $b^2-2bc+c^2$

C. $4a^2-4abc+c^2$

D. $4a^2-2abc+b^2c^2$

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Question #	ID

2.10 463eec13

If $x \neq 0$, which of the following expressions is equivalent to $\frac{\sqrt{16x^4y^8}}{x^3}$?

A. $8x^2y^4$

B. $4xy^4$

C. $4x^{-2}y^2$

D. $4x^{-1}y^4$

2.11 a1bf1c4e

$x^2 + 6x + 4$

Which of the following is equivalent to the expression above?

A. $(x + 3)^2 + 5$

B. $(x + 3)^2 - 5$

C. $(x - 3)^2 + 5$

D. $(x - 3)^2 - 5$

2.12 f237ccfc

The sum of $-2x^2 + x + 31$ and $3x^2 + 7x - 8$ can be written in the form $ax^2 + bx + c$, where a, b, and c are constants. What is the value of $a + b + c$?

2.13 a391ed22

$$\left(\frac{1}{2}x + \frac{3}{2}\right)\left(\frac{3}{2}x + \frac{1}{2}\right)$$

The expression above is equivalent to $ax^2 + bx + c$, where a, b, and c are constants. What is the value of b?

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2.14 c3a72da5

Which of the following is equivalent to the sum of $3x^4+2x^3$ and $4x^4+7x^3$?

A. $16x^{14}$

B. $7x^8+9x^6$

C. $12x^4+14x^3$

D. $7x^4+9x^3$

2.15 16de54c7

$2x^2+5x-12$

If the given expression is rewritten in the form $(2x-3)(x+k)$, where k is a constant, what is the value of k ?

2.16 d9137a84

Which expression represents the product of $\left(x^{-6}y^3z^5\right)$ and $\left(x^4z^5+y^8z^{-7}\right)$?

A. $x^{-2}z^{10}+y^{11}z^{-2}$

B. $x^{-2}z^{10}+x^{-6}z^{-2}$

C. $x^{-2}y^3z^{10}+y^8z^{-7}$

D. $x^{-2}y^3z^{10}+x^{-6}y^{11}z^{-2}$

2.17 3e9cc0c2

Which of the following is equivalent to $(1-p)(1+p+p^2+p^3+p^4+p^5+p^6)$?

A. $1-p^8$

B. $1-p^7$

C. $1-p^6$

D. $1-p^5$

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2.18 7348f046

$(2x+3)-(x-7)$

Which of the following is equivalent to the given expression?

A. $x-4$

B. $3x-4$

C. $x+10$

D. $2x^2+21$

2.19 b47419f4

$\left(\frac{1}{2}x+3\right)-\left(\frac{2}{3}x-5\right)$

Which of the following is equivalent to the expression above?

A. $-\frac{1}{6}x+8$

B. $-\frac{1}{6}x-2$

C. $-\frac{1}{3}x^2+\frac{1}{2}x+15$

D. $-\frac{1}{3}x^2-\frac{9}{2}x-15$

2.20 8838a672

$(4x^3-5x^2+3)-(6x^3+2x^2-x)$

Which of the following expressions is equivalent to the expression above?

A. $-10x^3-3x^2+x+3$

B. $-2x^3-7x^2+x+3$

C. $-2x^3-3x^2+x+3$

D. $10x^3-7x^2-x+3$

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2.21 0b3d25c5

Which of the following is equivalent to $\sqrt[4]{x^2+8x+16}$, where $x>0$?

A. $(x+4)^4$

B. $(x+4)^2$

C. $(x+4)$

D. $(x+4)^{\frac{1}{2}}$

2.22 c602140f

$(x-11y)(2x-3y)-12y(-2x+3y)$

Which of the following is equivalent to the expression above?

A. $x-23y$

B. $2x^2-xy-3y^2$

C. $2x^2+24xy+36y^2$

D. $2x^2-49xy+69y^2$

2.23 3206b905

Which of the following expressions is equivalent to $8x^{10}-8x^9+88x$?

A. $x(7x^{10}-7x^9+87x)$

B. $x(8^{10}-8^9+88)$

C. $8x(x^{10}-x^9+11x)$

D. $8x(x^9-x^8+11)$

2.24 26eb61c1

Which expression is equivalent to $6x^8y^2+12x^2y^2$?

A. $6x^2y^2(2x^6)$

B. $6x^2y^2(x^4)$

C. $6x^2y^2(x^6+2)$

D. $6x^2y^2(x^4+2)$

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2.25	6d04c89d

The expression $\frac{24}{6x+42}$ is equivalent to $\frac{4}{x+b}$, where b is a constant and $x > 0$. What is the value of b?

A. 7

B. 10

C. 24

D. 252