Question ID dd4ab4c4

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: dd4ab4c4

2.1

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

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

A. $a+b$

B. $2a+5b$

C. $4a+5b$

D. $4a+25b$

Question ID b8caaf84

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: b8caaf84

2.2

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

Question ID ad2ec615

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: ad2ec615

2.3

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

Question ID 42c71eb5

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: 42c71eb5

2.4

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

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. $4x^2+x+33$

Question ID a05bd3a4

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: a05bd3a4

2.5

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

Question ID cc776a04

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: cc776a04

2.6

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

Question ID a520ba07

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: a520ba07

2.7

$\sqrt[3]{x^3y^6}$

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

A. y^2

B. xy^2

C. y^3

D. xy^3

Question ID 5b6af6b1

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: 5b6af6b1

2.8

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

Question ID a255ae72

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: a255ae72

2.9

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

Question ID 463eec13

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: 463eec13

2.10

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

Question ID a1bf1c4e

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: a1bf1c4e

2.11

$x^2 + 6x + 4$

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

Question ID f237ccfc

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: f237ccfc

2.12

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 $a+b+c$?

Question ID a391ed22

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: a391ed22

2.13

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

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

Question ID c3a72da5

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: c3a72da5

2.14

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

Question ID 16de54c7

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: 16de54c7

$2x^2+5x-12$

2.15

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

Question ID d9137a84

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: d9137a84

2.16

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

Question ID 3e9cc0c2

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: 3e9cc0c2

2.17

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. $1-p^5$

Question ID 7348f046

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: 7348f046

2.18

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

Which of the following is equivalent to the given expression?

A. $x-4$

B. $3x-4$

C. $x+10$

D. $2x^2+21$

Question ID b47419f4

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: b47419f4

2.19

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

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

Question ID 8838a672

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: 8838a672

2.20

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

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

Question ID 0b3d25c5

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: 0b3d25c5

2.21

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

Question ID c602140f

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: c602140f

2.22

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

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

Question ID 3206b905

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Advanced Math	Equivalent expressions	■■□

ID: 3206b905

2.23

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