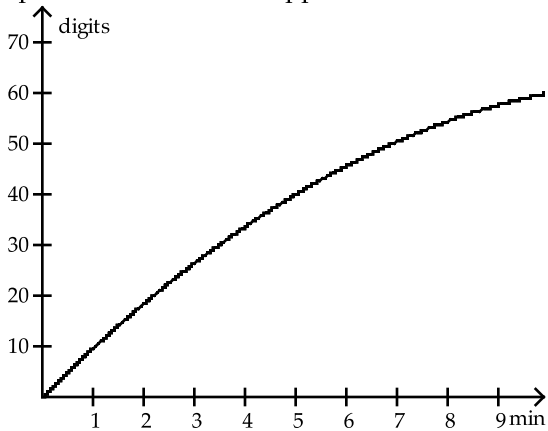


Simplify. Write the answer without negative exponents.

$$\left(\frac{-3xy^3}{9yx^4} \right)^2$$

Solve the problem and simplify.

Participants in a memorization experiment were able to recall an average of D digits in t minutes. Use the graph below to find the approximate value of D for $t = 4$ minutes.



Perform the indicated operations and simplify.

$$(5x^3 + 3x^5 - 1) + (-2x^4 + 2) - (-5x^4 + 7x^5 + 8x^3)$$

Perform the operations and simplify.

$$(s+1)(s-1) - (s-1)^2$$

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

Evaluate the polynomial $-xyz + x^5 + z^4$ for $x = -1$, $y = 2$, and $z = -3$.

Multiply and simplify.

$$(5y + 3)(5y - 3)(3 - 5y)$$

Solve the problem and simplify.

The height of a box is 2 more than its length ℓ , and the length is 3 more than its width w . Find a polynomial for the volume V in terms of the width w .

Perform the division.

$$\frac{4r^4 - 14r^2 - 21r - 45}{r^2 - 5}$$

Simplify. Write the answer without negative exponents.

$$(x^{-2} y^3 z^{-4})(x^{-7} y^{-7} z^6)$$

$$\left(\frac{x^5 y^2}{wz^3} \right)^{-3}$$

Factor: $9x^2 + 12xy + 4y^2$

Factor: $18 + a^3 - 9a - 2a^2$

Factor: $7x^9 - 28x^8 - 35x^7$

Factor: $8x^3 - 98x$

Factor: $x^{2n+1} + 3x^{n+1} + 2x$

The cube of a number is equal to twice the square of the number. Find all the numbers that satisfy this statement.

Factor: $x^2(x-3) - 2x(x-3) + (x-3)$

The length of a rectangular garden is 4 meters greater than the width. If the area of the rectangle is 96 square meters, then find the length and width.

Solve for x: $x(x - 7) = 18$

Solve for y: $y^3 - 4y^2 - 32y = 0$.

Solve for x: $(x + 3)(3x + 5) = 7$

Solve for V: $(bV - G)(V + A) = 0$

Solve for C: $C^2 - 5CD = 6D^2$

A cement walk of uniform width is built around a 20-ft by 40-ft rectangular pool. The total area of the pool and the walk is 1500 square feet. Find the width of the walk.