

#7

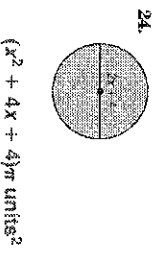
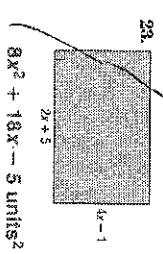
8-7 Skills Practice

Multiplying Polynomials

Find each product.

- $(m + 4)(m + 1)$
- $(x + 2)(x + 2)$
- $m^2 + 5m + 4$
- $x^2 + 4x + 4$
- $(b + 3)(b + 4)$
- $(t + 4)(t - 3)$
- $b^2 + 7b + 12$
- $t^2 + t - 12$
- $(r + 1)(r - 2)$
- $(z - 5)(z + 1)$
- $r^2 - r - 2$
- $z^2 - 4z - 5$
- $(3c + 1)(c - 2)$
- $(2x - 6)(x + 3)$
- $3c^2 - 5c - 2$
- $2x^2 - 18$
- $(d - 1)(d - 4)$
- $2d^2 - 3d - 20$
- $5d^2 - 9d + 4$
- $(3a - 7)(a + 3)$
- $(g + 5)(g - 1)$
- $(3a + 5)(3a - 2)$
- $5g^2 + 24g - 5$
- $3m^2 + 2m - 21$
- $6m^2 - 6$
- $(3b + 5)(3b - 2)$
- $(2m + 2)(3m - 3)$
- $9b^2 + 3b - 6$
- $6m^2 - 6$
- $(4c + 1)(2c + 1)$
- $18a^2 - 19a + 5$
- $8c^2 + 6c + 1$
- $(5a - 2)(2a - 3)$
- $(x - 3)(2x - y)$
- $17(4h - 2)(4h - 1)$
- $2x^2 - 3xy + y^2$
- $16h^2 - 12h + 2$
- $2x^2 - 3xy + y^2$
- $(e + 4)(d^2 + 3e - 6)$
- $(3 + 3t^2 + 6t + 4)$
- $a^3 + 7a^2 + 6a - 24$
- $(t + 4)(t^2 + 3t - 6)$
- $t^3 + 3t^2 + 6t + 4$
- $k^3 + 7k^2 + 6k - 24$
- $22(m + 3)(m^2 + 3m + 5)$
- $m^3 + 6m^2 + 14m + 15$

GEOMETRY Write an expression to represent the area of each figure.



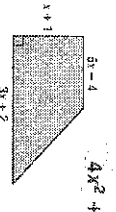
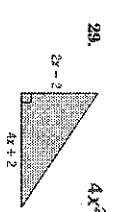
8-7 Practice (Average)

Multiplying Polynomials

Find each product.

- $(g + 6)(g + 5)$
- $(x + 7)(x + 4)$
- $g^2 + 11g + 30$
- $x^2 + 11x + 28$
- $(a - 4)(a - 6)$
- $(a - 5)(a - 8)$
- $r^2 - 10r + 24$
- $a^2 - 13a + 40$
- $(4c + 6)(c - 4)$
- $(2x - 9)(2x + 4)$
- $4c^2 - 10c - 24$
- $4x^2 - 10x - 24$
- $(b + 3)(3b - 4)$
- $(4m + 2)(4m - 3)$
- $12b^2 - 7b - 12$
- $16m^2 - 4m - 6$
- $(6a - 3)(7a - 4)$
- $24f^2 - 24f + 6$
- $42a^2 - 45a + 12$
- $14(6h - 3)(4h - 2)$
- $24f^2 - 24f + 6$
- $(3a - b)(2a - b)$
- $(4g + 3)(2g + 3h)$
- $6a^2 - 5ab + b^2$
- $8g^2 + 18gh + 9h^2$
- $(m + 5)(m^2 + 4m - 8)$
- $(t + 3)(t^2 + 4t + 7)$
- $m^3 + 9m^2 + 12m - 40$
- $t^3 + 7t^2 + 19t + 21$
- $(2h + 3)(2h^2 + 3h + 4)$
- $(3d + 3)(2d^2 + 5d - 2)$
- $4h^2 + 12h^2 + 17h + 12$
- $6d^3 + 21d^2 + 9d - 6$
- $(3g + 2)(9g^2 - 12g + 4)$
- $27f^3 + 36f^2 + 24f + 8$
- $27q^3 - 18q^2 - 12q + 8$
- $(3r + 2)(6r^2 + 6r + 4)$
- $27r^3 + 36r^2 + 24r + 8$
- $(3c^2 + 2c - 1)(2c^2 + c + 9)$
- $8t^4 + 8t^3 + 10t^2 + 4t - 6$
- $6c^4 + 7c^3 + 27c^2 + 17c - 9$
- $(2e^2 - 2e - 3)(2e^2 - 4e + 3)$
- $8t^4 + 8t^3 + 10t^2 + 4t - 6$
- $4x^4 - 12x^3 + 8x^2 + 6x - 9$
- $3y^4 - 6y^3 - 17y^2 - 18y - 10$

GEOMETRY Write an expression to represent the area of each figure.



31. **NUMBER THEORY** Let x be an even integer. What is the product of the next two consecutive even integers? $x^2 + 6x + 8$
32. **GEOMETRY** The volume of a rectangular pyramid is one third the product of the area of its base and its height. Find an expression for the volume of a rectangular pyramid whose base has an area of $3x^2 + 12x + 9$ square feet and whose height is $x + 3$ feet. $x^3 + 7x^2 + 15x + 9$ feet³

Donut...

#8

S) $(n+2)(n+5)$
 $n^2 + 5n + 2n + 10$
 $n^2 + 7n + 10$

E) $(3x+2)(5x+1)$
 $15x^2 + 3x + 10x + 2$
 $15x^2 + 13x + 2$

A) $(n+4)(n+9)$
 $n^2 + 9n + 4n + 36$
 $n^2 + 13n + 36$

A) $(9x-2)(4x-4)$
 $36x^2 - 36x - 8x + 8$
 $36x^2 - 44x + 8$

E) $(n-3)(n+10)$
 $n^2 + 10n - 3n - 30$
 $n^2 + 7n - 30$

L) $(6x+1)(3x-2)$
 $18x^2 - 12x + 3x - 2$
 $18x^2 - 9x - 2$

w) $(n-6)(n-5)$
 $n^2 - 5n - 6n + 30$
 $n^2 - 11n + 30$

E) $(5x-4)(2x+7)$
 $10x^2 + 35x - 8x - 28$
 $10x^2 + 27x - 28$

O) $(2n+2)(3n+8)$
 $6n^2 + 16n + 6n + 16$
 $6n^2 + 22n + 16$

O) $(2x+5y)(x+6y)$
 $2x^2 + 12xy + 5xy + 30y^2$
 $2x^2 + 17xy + 30y^2$

A) $(7n+5)(4n-1)$
 $28n^2 - 7n + 20n - 5$
 $28n^2 + 13n - 5$

H) $(4x-y)(9x-4y)$
 $36x^2 - 16xy - 9xy + 4y^2$
 $36x^2 - 25xy + 4y^2$

m)	t^2	$+4t$	-3
t	t^3	$4t^2$	$-3t$
+2	$2t^2$	$8t$	-6

$t^3 + 6t^2 + 5t - 6$

$$\begin{array}{r|l|l|l}
 T) & 3t^2 & +2t & +5 \\
 2t & \cancel{6t^3} & \cancel{4t^2} & \cancel{10t} \\
 -3 & \cancel{-9t^2} & \cancel{6t} & \cancel{-15}
 \end{array}$$

$$\boxed{6t^3 - 5t^2 + 4t - 15}$$

$$\begin{array}{r|l|l|l}
 V) & 4t^2 & -3t & -10 \\
 5t & \cancel{20t^3} & \cancel{-15t^2} & \cancel{-50t} \\
 +2 & \cancel{8t^2} & \cancel{-10t} & \cancel{-20}
 \end{array}$$

$$\boxed{20t^3 - 7t^2 - 50t - 20}$$

$$\begin{array}{r|l|l|l}
 K) & 2t^2 & -7t & +2 \\
 4t & \cancel{8t^3} & \cancel{-28t^2} & \cancel{8t} \\
 +1 & \cancel{2t^2} & \cancel{-7t} & \cancel{2}
 \end{array}$$

$$\boxed{8t^3 - 26t^2 + t + 2}$$

$$\begin{array}{r|l|l|l}
 H) & 2t^2 & -t & -5 \\
 3t & \cancel{6t^3} & \cancel{-3t^2} & \cancel{-15t} \\
 -4 & \cancel{-8t^2} & \cancel{4t} & \cancel{20}
 \end{array}$$

$$\boxed{6t^3 - 11t^2 - 11t + 20}$$

$$\begin{array}{r|l|l|l}
 L) & t^2 & +2t & +9 \\
 8t & \cancel{8t^3} & \cancel{16t^2} & \cancel{72t} \\
 -3 & \cancel{-3t^2} & \cancel{-6t} & \cancel{-27}
 \end{array}$$

$$\boxed{8t^3 + 13t^2 + 66t - 27}$$

#9

Pop Star...

$$1) (x+4)(x+3) - x(x-2) = 48$$

$$x^2 + 3x + 4x + 12 - x^2 + 2x = 48$$

$$9x + 12 = 48$$

$$9x = 36$$

$$\boxed{x = 4}$$

$$5) (x+5)(x+3)$$

$$x^2 + 3x + 5x + 15$$

$$x^2 + 8x + 15$$

$$x(x-3) = x^2 - 3x$$

$$x^2 + 8x + 15 - (x^2 - 3x)$$

$$\boxed{11x + 15}$$

$$2) (n+7)(n+2) - n(n+5) = 66$$

$$n^2 + 2n + 7n + 14 - n^2 - 5n = 66$$

$$4n + 14 = 66$$

$$4n = 52$$

$$\boxed{n = 13}$$

$$6) (4x-1)(x+8)$$

$$4x^2 + 32x - x - 8$$

$$4x^2 + 31x - 8$$

$$2x(x+4) = 2x^2 + 8x$$

$$4x^2 + 31x - 8 - (2x^2 + 8x)$$

$$\boxed{2x^2 + 23x - 8}$$

$$3) (t+3)(t+8) = t(t-5) + 168$$

$$t^2 + 8t + 3t + 24 = t^2 - 5t + 168$$

$$11t + 24 = -5t + 168$$

$$16t = 144$$

$$\boxed{t = 9}$$

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

$$6x^2 - 4x$$

$$(x-1)(x+3)$$

$$x^2 + 3x - x - 3$$

$$x^2 + 2x - 3$$

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

$$\boxed{5x^2 - 6x + 3}$$

$$4) (2y+1)(y+6) = 2y(y+4) + 81$$

$$2y^2 + 12y + y + 6 = 2y^2 + 8y + 81$$

$$13y + 6 = 8y + 81$$

$$5y = 75$$

$$\boxed{y = 15}$$

$$8) (x+2)(x+6)$$

$$x^2 + 6x + 2x + 12$$

$$x^2 + 8x + 12$$

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

$$x^2 + 8x + 12 - (x^2 - 2x)$$

$$10x + 12 = 132$$

$$10x = 120$$

$$\boxed{x = 12}$$

$$11) (2x+4)(x+4)$$

$$2x^2 + 8x + 4x + 16$$

$$2x^2 + 12x + 16$$

$$2x(x) = 2x^2$$

$$2x^2 + 12x + 16 - 2x^2$$

$$\boxed{12x + 16}$$

$$9) (2x+10)(2x+7)$$

$$4x^2 + 14x + 20x + 70$$

$$4x^2 + 34x + 70$$

$$2x(2x) = 4x^2$$

$$4x^2 + 34x + 70 - 4x^2$$

$$34x + 70 = 342$$

$$34x = 272$$

$$\boxed{x = 8}$$

$$12) 12x + 16 = 136$$

$$12x = 120$$

$$\boxed{x = 10ft}$$

$$13) (x+5)(x+2)$$

$$x^2 + 2x + 5x + 10$$

$$x^2 + 7x + 10$$

$$x(x+3) = x^2 + 3x$$

$$x^2 + 7x + 10 - (x^2 + 3x)$$

$$\boxed{4x + 10}$$

$$10) (x+8)(x+8)$$

$$x^2 + 8x + 8x + 64$$

$$x^2 + 16x + 64$$

$$(x+3)(x-3)$$

$$x^2 - 3x + 3x - 9$$

$$x^2 - 9$$

$$x^2 + 16x + 64 - (x^2 - 9)$$

$$16x + 73$$

$$16x + 73 = 185$$

$$16x = 112$$

$$\boxed{x = 7}$$

$$14) 4x + 10 = 54$$

$$4x = 44$$

$$\boxed{x = 11in}$$