Practice 12.1, 12.2, 12.3

Name_____

Evaluate the exponential form.

1) 12^0

2) -14^0

3) -3^2

4) $\left(\frac{4}{5}\right)^3$

Simplify. Assume that no denominator is zero and 0^0 is not considered.

5) $4a^3 \cdot 2a^5$

6) $(x^5y^3)(x^8y^7z^0)$

Add as indicated.

7) $(7s + 14t) + (4t - 3s)$

8) $(4a^4 - 7a^3) + (3a^4 - 4a^3)$

Subtract.

9) $(20x^4 + 11x^2) - (-13x^4 + 4x^2)$

10) $(-14z + 8z^7 + 9z^6) - (-2z^6 + 5z^7 + 11z)$

Simplify the expression. Assume that variables represent nonzero numbers.

11) $(x^7)^4(x^4)$

12) $(-4x^4y^5)^2$

13) $(ab^3)^2(ab)^6$

14) $\left(\frac{x}{5}\right)^2$

15) $\left(\frac{x+y}{4}\right)^3$

Multiply.

16) $-7x(-2x - 4)$

17) $4x^3y(xy^2 + 3)$

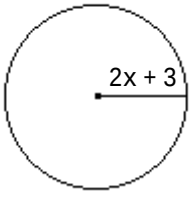
18) $(x + 4)(x - 4)$

19) $(4x - 10)(x + 1)$

20) $(x - 5)(9x^2 + x + 7)$

Solve the problem.

21) Determine a polynomial that represents the area of the figure. Leave π in the answer.



1) 1
2) -1
3) -9
4) $\frac{64}{125}$
5) $8a^8$
6) $x^{13}y^{10}$
7) 4s + 18t
8) $7a^4 - 11a^3$
9) $33x^4 + 7x^2$
10) $3z^7 + 11z^6 - 25z$
11) x^{32}
12) $16x^8y^{10}$
13) a^8b^{12}
14) $\frac{x^2}{25}$
15) $\frac{(x + y)^3}{64}$
16) $14x^2 + 28x$
17) $4x^4y^3 + 12x^3y$
18) $x^2 - 16$
19) $4x^2 - 6x - 10$
20) $9x^3 - 44x^2 + 2x - 35$
21) $4\pi x^2 + 12\pi x + 9\pi$