Name: _____
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2.1-2.3 QUIZ

Show all your work.
No calculator.

Simplify the following expressions.

1. 5^3

$5 \cdot 5 \cdot 5$
$25 \cdot 5$
125

2. $(10-6)^2$

$(4)^2$
$4 \cdot 4$
16

3. $7+4^3$

$7+4 \cdot 4 \cdot 4$
$7+16 \cdot 4$
$7+64$
71

Evaluate the following expressions when $x = 2, y = 4$, and $z = 5$.

4. x^2+y^2

$= 2^2+4^2$
$= 2 \cdot 2 + 4 \cdot 4$
$= 4+16$
$= 20$

5. $(y+z)^2$

$(4+5)^2$
$(9)^2$
$9 \cdot 9$
81

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

$2(4+5)^2$
$2(9)^2$
$2(9 \cdot 9)$
$2(81)$
162

7. $(xz)^2$

$(2 \cdot 5)^2$
$(10)^2$
$10 \cdot 10$
100

8. $4+2y^3$

$4+2(4)^3$
$4+2(4 \cdot 4 \cdot 4)$
$4+2(64)$
$4+128$
132

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Simplify the following expressions (rewrite as a single power of the given base.

9. $75^2 \cdot 75^8$

75^{10}

10. $x^{10} \cdot x^{43}$

x^{53}

Write the following numbers using words.
Example: 7.5 is seven and five tenths.

11. 0.246 (thousandths)

two hundred forty-six thousandths

12. 98.0762 (ten thousandths)

ninety-eight and seven hundred sixty-two ten thousandths

Rewrite the following numbers in expanded form as decimals.

13. $(3 \times 10{,}000) + (5 \times 100) + (2 \times 0.01) + (4 \times 0.001)$

30,000 + 500 + 0.02 + 0.004

30,500.024

14. $(9 \times 1) + (9 \times 0.001) + (9 \times 0.0001)$

9 + 0.009 + 0.0009

9.0099

Round to the indicated place value.

15. Round 5.7894 to the nearest tenth.

5.8

16. Round 0.98543233 to the nearest ten-thousandth.

0.9854

17. Round 10,457,865.09 to the nearest thousand.

10,458,000