Name: Grade: No:

M.3 Mathematics booklet

Unit 1: Square Roots and Surface Area

Square roots of perfect squares

1) Calculate the number whose square root is:

a. $\frac{1}{5}$:

b. $\frac{2}{9}$:

c. 0.8 :

d. 4.8 :

2) Find each square root:

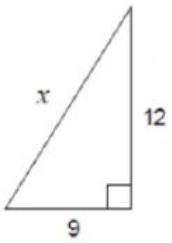
a. $\sqrt{\frac{36}{81}}$:

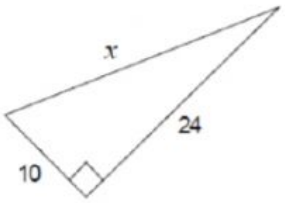
b. $\sqrt{\frac{49}{64}}$:

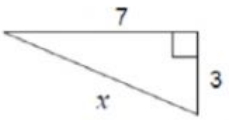
c. $\sqrt{\frac{169}{4}}$:

d. $\sqrt{\frac{25}{169}}$:

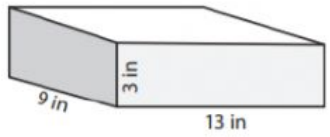
3) Use the Pythagorean Theorem to find the length of each hypotenuse:



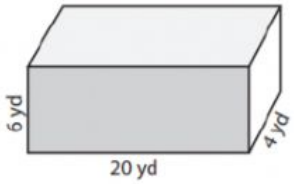




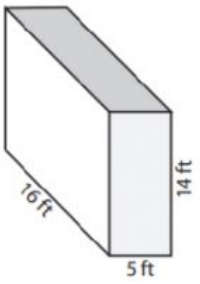
4) Find the Surface Area of each Rectangular Prisms:



Surface Area = _____

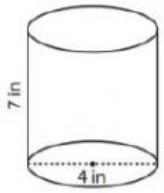


Surface Area = _____

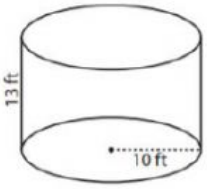


Surface Area = _____

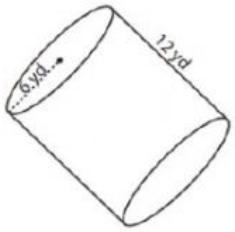
5) Find the Surface Area of each Cylinder



Surface Area = _____



Surface Area = _____



Surface Area = _____

Unit 2: Powers and Exponent laws

6) Write as repeated multiplication and in standard form

a. 3^5 : _____
b. 4^4: _____
c. 5^5: _____
d. 6^3: _____

7) Write as a power

a. $5 \times 5 \times 5 \times 5 \times 5 \times 5$: _____

b. $7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7$: _____

c. $(-3)(-3)(-3)(-3)$: _____

d. $14 \times 14 \times 14 \times 14 \times 14 \times 14 \times 14 \times 14 \times 14 \times 14 \times 14 \times 14 \times 14$: _____

8) Evaluate

a. $6^2 + 15$: _____

b. $9^2 - 4^2$: _____

c. $(11 - 14)^2$: _____

d. $(9 + 4)^2$: _____

9) Write as a power

a. $3^6 \times 3^5$: _____

b. $(-3)^4 \times (-3)^2$: _____

c. $(-7)^7 \times (-7)^8$: _____

d. $9^4 \times 9^5$: _____

10) Write as a power

a. $12^8 \div 12^6$: _____

b. $(-5)^8 \div (-5)^5$: _____

c. $8^{13} \div 8^9$: _____

d. $(-13)^{27} \div (-13)^{14}$: _____

11) Simplify, then evaluate

a. $4^2 \times 4^3 \times 2$: _____

b. $13^9 \div 13^7 \times 13^0$: _____

c. $\frac{5^8}{5^5}$: _____

12) Write as a power

a. $(4^3)^2$: _____

b. $(-5^2)^3$: _____

c. $-(2^3)^4$: _____