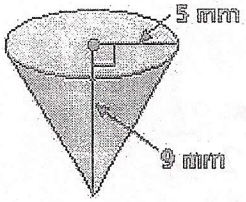
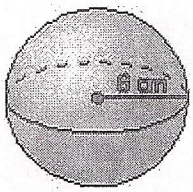
Key

Benchmark Review #2

Find the volume of the solid. Round your answer to the nearest tenth.

1. 

$75\pi \approx 235.5\ mm^3$

2. 

$288\pi \approx 904.32\ cm^3$

Evaluate

3. $\left(3^2\right)^{-1}$ $\frac{1}{9}$

4. $12^3 \cdot 12^{-4}$ $\frac{1}{12}$

5. $\frac{(-7)^6}{(-7)^4}$ 49

Multiply. Write your answer in scientific notation.

6. $\left(4.6 \times 10^{-2}\right) \times \left(1.0 \times 10^{-8}\right)$ 4.6×10^{-10}

7. $\left(2.5 \times 10^{7}\right) \times \left(1.4 \times 10^{5}\right)$ 3.5×10^{12}

Solve for x.

8) $\frac{5}{x} = \frac{12}{18}$ $x = 7.5$

9) $140 - 40 \div 4 \times 2$

120

10) Classify the numbers as rational or irrational.

a) $\sqrt{49}$ b) $\sqrt{32}$ c) 3.14 d) π e) $\frac{5}{6}$

rational rational rational irrational irrational

11) Write the equation for this pattern:

Step 1 Step 2 Step 3 Step 4

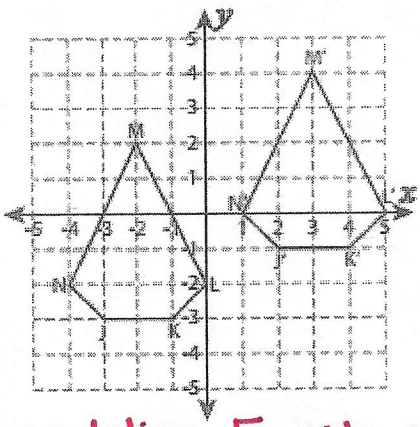
Step #	happy
1	2
2	5
3	8
4	11

+3 +3 +3

x = Step #
y = Total # of happy faces

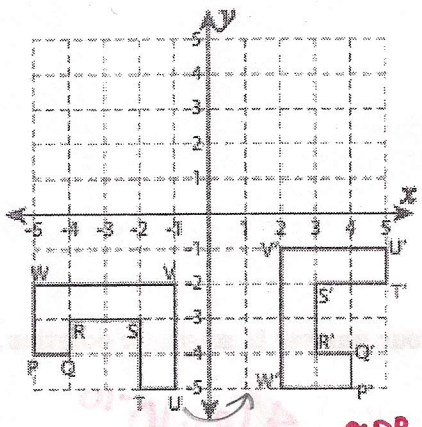
$y = 3x - 1$

12) Describe the transformation.



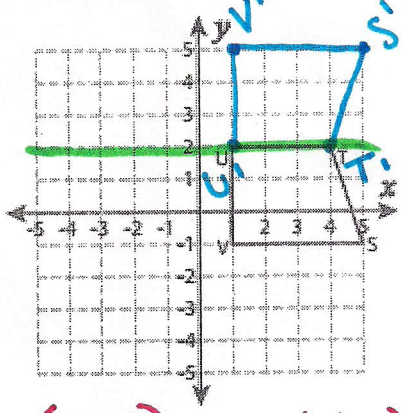
translation: 5 units right 2 units up

13. Describe the transformation.



rotation 90° counter clockwise

14) Reflection across the line y = 2



S': (5,5), T': (4,2)

U': (1,2), V': (1,5)

15) Find the unknown side.