

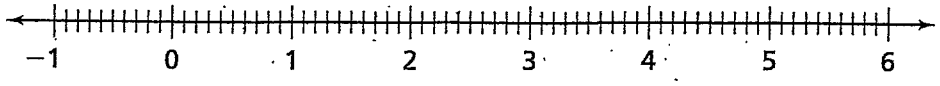
Homework #17

Trad.

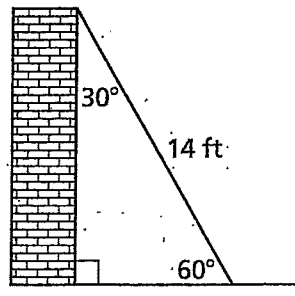
Name: _____

① Arrange the following numbers on a number line.

$$\frac{15}{7}, \sqrt{17}, \sqrt{25}, \sqrt{6}, 1.5, \sqrt[3]{27}$$



② A 14-foot piece of wire is strung between a building and the ground, making a 30-60-90 triangle as shown.



a. How far straight out from the base of the building is the wire attached to the ground?

b. How far up the side of the building is the wire attached?

③ Write each fraction as a repeating or terminating decimal.

$$\frac{5}{2}$$

$$\frac{2}{11}$$

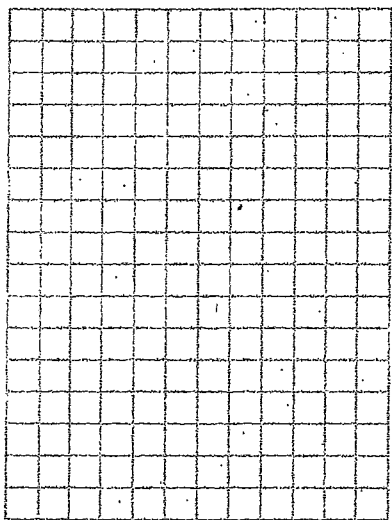
$$\frac{16}{9}$$

④ Evaluate $\sqrt{50}$. Is this a repeating, terminating, or nonrepeating decimal?

5) Monty has a different plan for distributing prize money for the trivia contest. The contestant will receive \$5 for the first correct response. For the second correct response, the total winnings will increase to \$25. For the third correct response, the total winnings will increase to \$125, and so on.

a. Make a table showing a contestant's earnings for answering questions 1 through 6 correctly.

b. Make a graph of the data in your table.



c. Write an equation for the relationship between the number of correct responses c and the amount of money the contestant will receive m .

6) Simplify the following expression. Express your answer in scientific notation.
 $(4.0 \times 10^4)(1.6 \times 10^5)$

7) Find an equation to relate each set of conditions.

Remember...

$$y = mx + b$$

a. A line with slope 3.5 and y-intercept (0, -4).

b. Earnings, E , of a disk jockey who charges \$25 for travel to an event and \$20 per hour of time worked, h .

c. A line through (2, 15) and (6, 7).

use your exponent rules.

8.) a.) $a^2 \cdot a^3 =$ _____

b.) $\frac{10^{12}}{10^5} =$ _____

c.) $(6^2)^3 =$ _____

d.) $6^{-2} =$ _____

e.) $\frac{7^2}{7^4} =$ _____

