

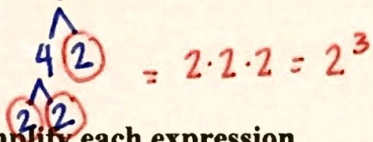
Name: Selected Answers Period: \_\_\_\_\_

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## HW 6-5: Introduction to Roots

Make a factor tree for each of the following numbers. Expression your answers as a product of prime numbers.

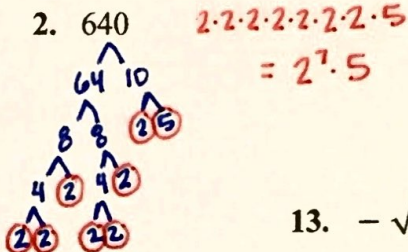
1. 8



Simplify each expression.

4.  $5^3$

2. 640



3. 144

13.  $-\sqrt{121}$     -11

5.  $-\sqrt{144}$     -12

14.  $\sqrt{64}$

6.  $8^2$

15.  $\sqrt{\frac{4}{9}}$      $\frac{2}{3}$

7.  $-\sqrt{324}$     -18

16.  $\frac{6^2}{7^2}$

8.  $\sqrt{36}$

17.  $\sqrt{\frac{25}{36}}$      $\frac{5}{6}$

9.  $\sqrt{100}$     10

18.  $\sqrt{400}$

10.  $3^3$

19.  $\sqrt[3]{64}$     4

11.  $\frac{8^2}{11^2}$      $\frac{64}{121}$

20.  $\sqrt[3]{1}$

12.  $4^2$

Simplify each expression.

21.  $\sqrt[3]{8}$      2

22.  $\sqrt[3]{125}$

23.  $\sqrt[3]{27}$      3

24.  $\sqrt{0.25}$

25.  $\sqrt{0.0169}$      0.13

26.  $-\sqrt{\frac{64}{225}}$

27.  $\sqrt{-\frac{16}{25}}$      Not Real

28.  $\sqrt{2.56}$

Solve for the given variable.

29.  $v^2 = 81$

$v = 9$

30.  $w^2 = \frac{36}{100}$

34.  $x^3 = \frac{27}{64}$

35.  $\sqrt{a} = 9$       $a = 81$

31.  $a^2 = 1.21$

$a = 1.1$

36.  $\sqrt{b} = 4$

32.  $z^3 = \frac{1}{8}$

37.  $\sqrt{x} = 16$       $x = 256$

33.  $c^2 = \frac{9}{64}$       $c = \frac{3}{8}$

38.  $\sqrt[3]{x} = 8$