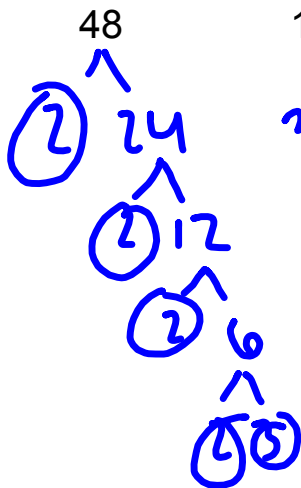
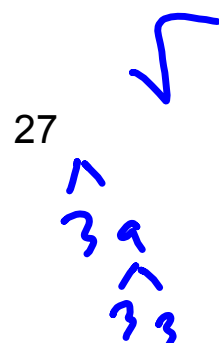
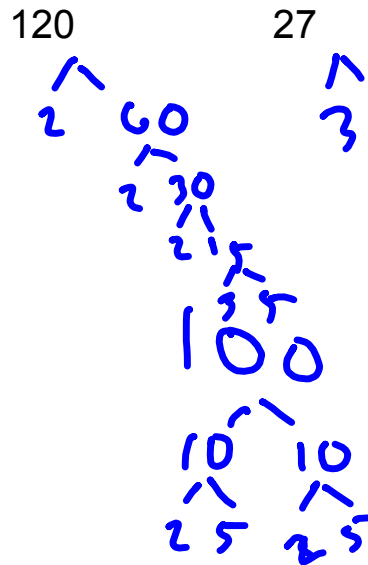
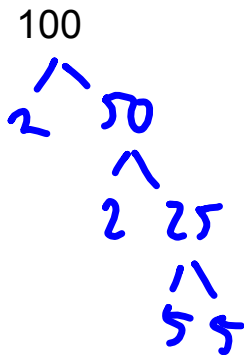


Warm Up:

Make **factor trees** for the following numbers



$$2^4 \cdot 3$$



## Google: "A visual approach to simplifying radicals"

<https://www.wisc-online.com/learn/formal-science/mathematics/tmh5706/a-visual-approach-to-simplifying-radicals>

If you finish early, try these:

$\sqrt{216}$   
 $\sqrt{108}$   
 $\sqrt{54}$   
 $\sqrt{27}$   
 $\sqrt{9}$   
 $\sqrt{3}$   
 $3\sqrt{3}$   
 $2 \cdot 3 \cdot \sqrt{2 \cdot 3}$   
 $6\sqrt{6}$

$\sqrt{27}$   
 $\sqrt{9}$   
 $\sqrt{3}$   
 $3\sqrt{3}$   
 $\sqrt{32x^3}$   
 $\sqrt{16}$   
 $\sqrt{8}$   
 $\sqrt{4}$   
 $\sqrt{2}$   
 $2 \cdot 2 \cdot x \cdot \sqrt{2x}$   
 $4x\sqrt{2x}$   
 $\sqrt[3]{16}$   
 $\sqrt[3]{8}$   
 $\sqrt[3]{2}$   
 $2\sqrt[3]{2}$   
 $6\sqrt{2}$   
 $\cancel{X} \cdot \cancel{X} \cdot X$

Practice:

1.  $\sqrt{75}$

2.  $\sqrt{225x^2}$

3.  $\sqrt{24}$

4.  $2\sqrt{8xy^3}$

For cube roots, follow the same steps, only look for cube factors (1, 8, 27, 64, 125, etc.)

4.  $\sqrt[3]{250}$

5.  $\sqrt[3]{225x^3y^5}$

Simplify all radicals completely.

1.  $3\sqrt{9x^4}$

2.  $\sqrt{40b^3c}$

3.  $\sqrt[3]{288}$

4.  $\sqrt{882y^6}$

5.  $2x\sqrt{68x^2}$

6.  $\sqrt{24ab^2c^3}$

7.  $4\sqrt{1000}$

8.  $\sqrt{210x^9}$

9.  $\sqrt[3]{64x^4y^6}$

$4\sqrt{3}$  is the simplified form of what?

$2\sqrt[3]{5}$  is the simplified form of what?

Joke sheet

January 7, 2020

