SECTION 9.5
#12, 13, 15, 16, 22, 23, 31, 41, 45

BEN WILSON
PER 3
3/26/20

12) $\sqrt[3]{343}$

$\sqrt[3]{7 \cdot 7 \cdot 7}$

343 → 7, 49 → 7, 7

7
NATURAL
WHOLE
INTEGER
RATIONAL

13) $\frac{\pi}{6}$ AN IRRATIONAL # DIVIDED BY 6 IS STILL IRRATIONAL.

IRRATIONAL

15) -1.125

A TERMINATING DECIMAL IS RATIONAL.

RATIONAL

16) $\frac{52}{13}$ } SIMPLIFY

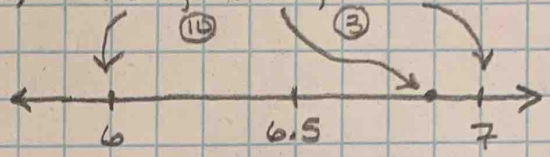
52 → 2, 26 → 2, 13 (13)

$\frac{2 \cdot 2 \cdot 13}{13_1}$

4
NATURAL
WHOLE
INTEGER
RATIONAL

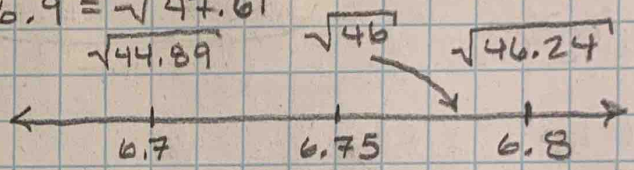
22) $\sqrt{46}$

a) $\sqrt{36}$, $\sqrt{46}$, $\sqrt{49}$ (16), (3)



$\sqrt{46} \approx 7$

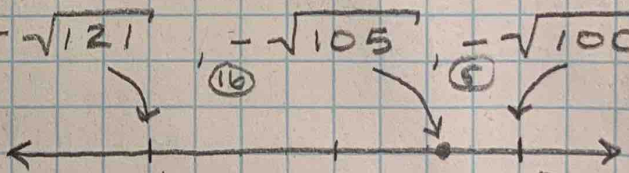
b) $6.7 = \sqrt{44.89}$
$6.8 = \sqrt{46.24}$
$6.9 = \sqrt{47.61}$



$\sqrt{46} \approx 6.8$

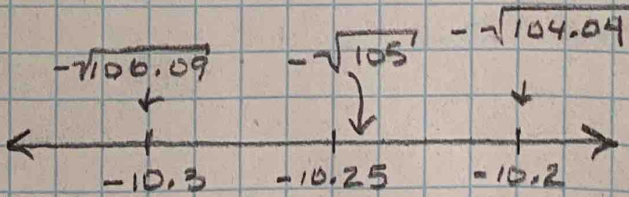
23) $-\sqrt{105}$

a) $-\sqrt{121}$, $-\sqrt{105}$ (16), $-\sqrt{100}$ (5)



$-\sqrt{105} \approx -10$

$-10.2 = -\sqrt{104.04}$
$-10.3 = -\sqrt{106.09}$
$-10.4 = -\sqrt{108.16}$

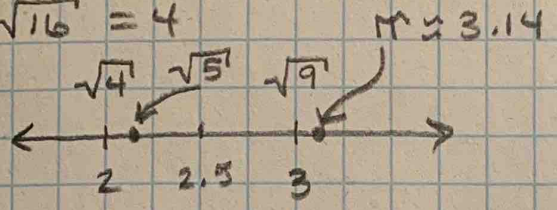


$-\sqrt{105} \approx -10.2$

#31, 41, 45

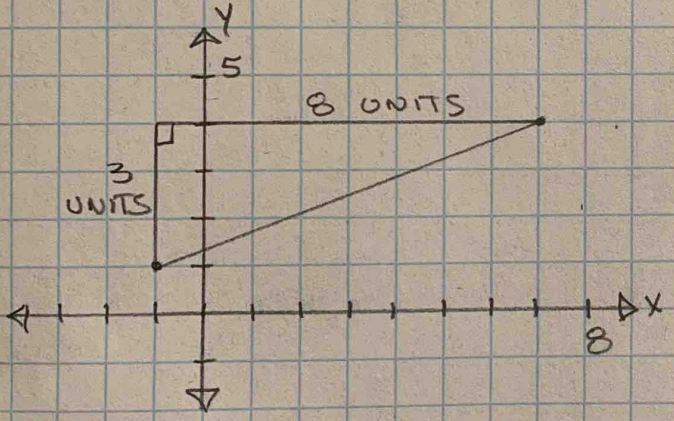
31) $\sqrt{5}$, π

$\sqrt{1} = 1$
$\sqrt{4} = 2$
$\sqrt{9} = 3$
$\sqrt{16} = 4$



$\boxed{\sqrt{5} < \pi}$

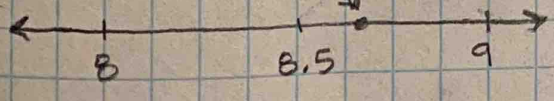
41) (-1, 1), (7, 4)



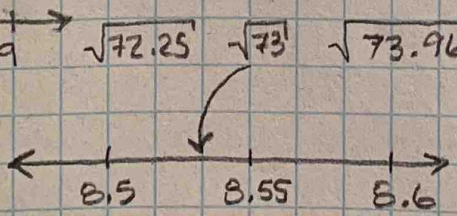
$a^2 + b^2 = c^2$
$(3)^2 + (8)^2 = c^2$
$9 + 64 = c^2$
$\sqrt{73} = \sqrt{c^2}$

$c = \sqrt{73}$

$\sqrt{64}$, $\sqrt{73}$, $\sqrt{81}$
8 (11) (8)

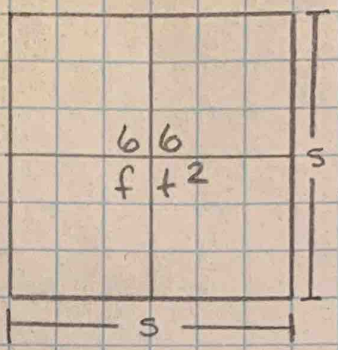


$8.5 = \sqrt{72.25}$
$8.6 = \sqrt{73.96}$
$8.7 = \sqrt{75.69}$



THE DISTANCE BETWEEN THE 2 POINTS IS APPROX. 8.5 UNITS

45)



$A = s^2$
$\sqrt{(66)} = \sqrt{s^2}$

$s = \sqrt{66}$

$\sqrt{64}$, $\sqrt{66}$, $\sqrt{81}$
(2) (15)
8 9

THE SIDE LENGTH S IS APPROX. 8 ft.