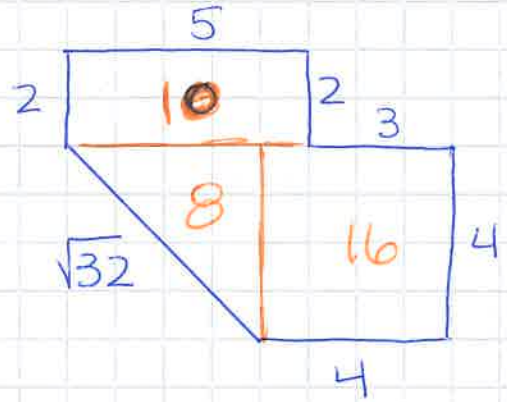
homework 8-71 to 8-77

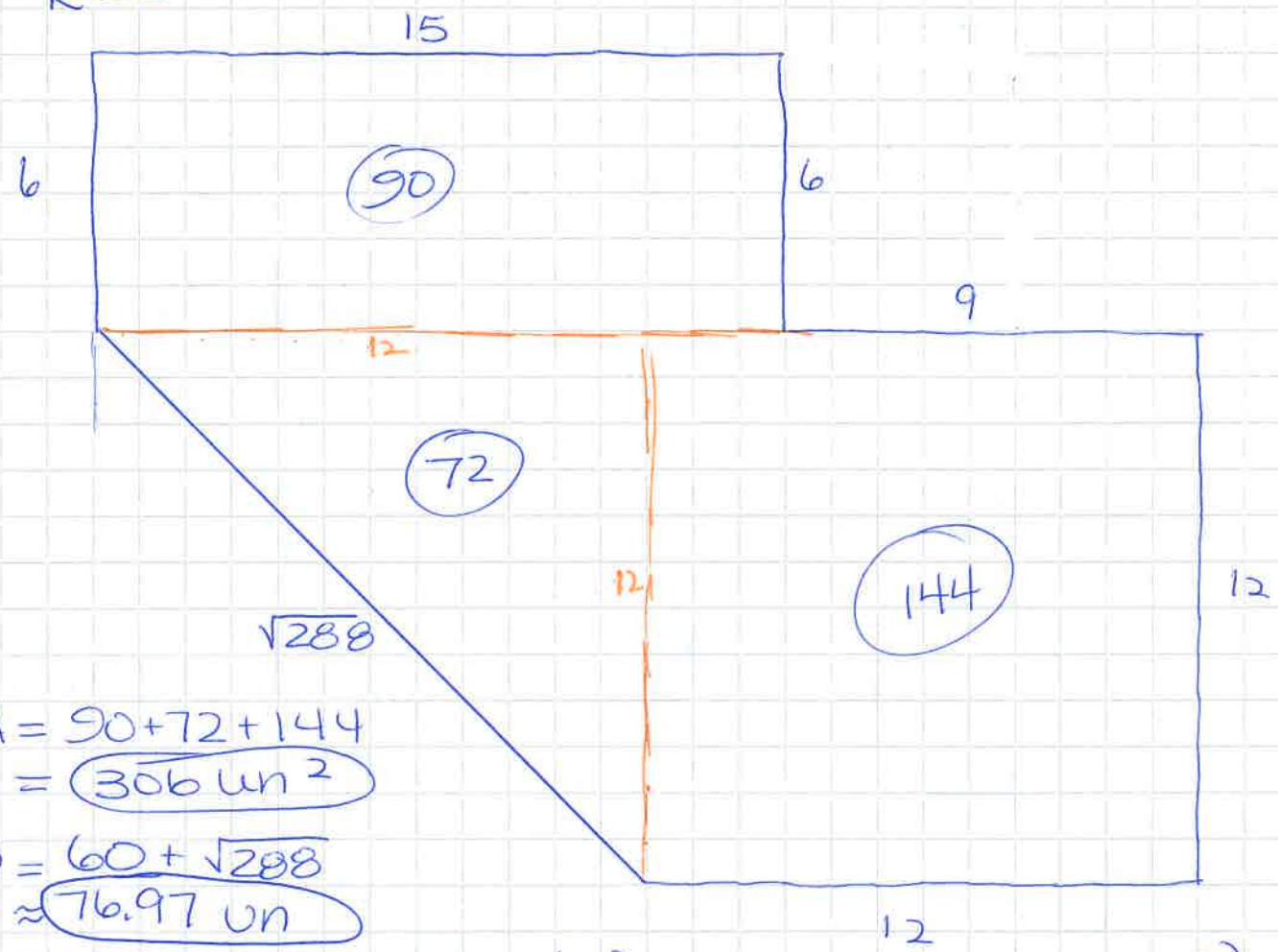
8-71

a) $A = 10 + 8 + 16$
$= 34 \text{ un}^2$

$P = 20 + \sqrt{32}$
$\approx 25.66 \text{ un}$



b) $k = 3$

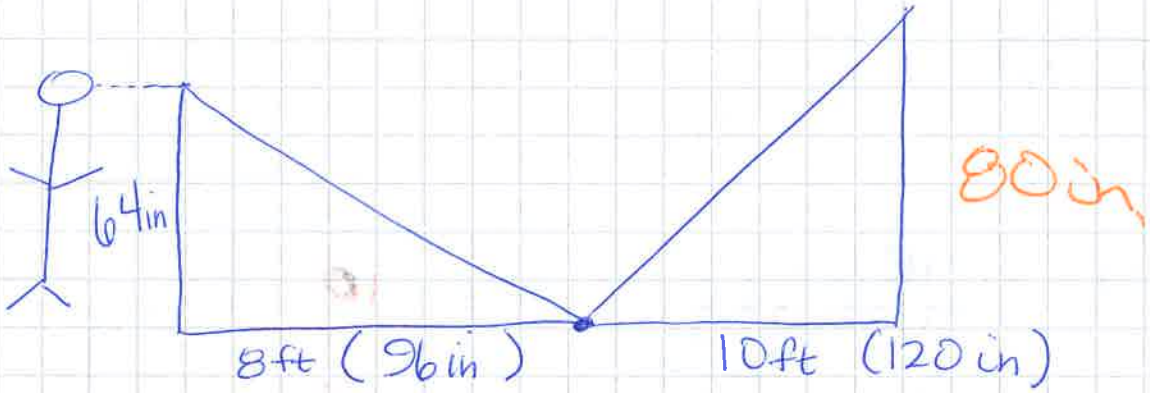


$A = 90 + 72 + 144$
$= 306 \text{ un}^2$

$P = 60 + \sqrt{288}$
$\approx 76.97 \text{ un}$

c) ratio of perimeters $\approx \frac{77}{26} \approx \frac{3}{1}$ (r) ratio of areas $= \frac{306}{34} = \frac{9}{1}$ (r^2)

8-72



$$\frac{64}{96} = \frac{x}{120} \qquad \frac{64}{8} = \frac{x}{10}$$

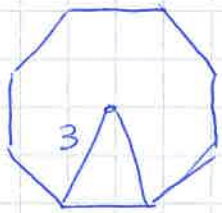
$x = 80$ inches $\qquad x = 80$ inches

doesn't matter if you convert to inches or not

or $\frac{80}{12} = 6.\overline{6}$ feet

$6\frac{2}{3}$ feet

8-73



$$A_\Delta = \frac{1}{2}(3)(1.5\sqrt{3})$$

$$A \approx 3.9\,(6)$$

$$A \approx 23.4$$

$$\frac{360}{6} = 60$$

rectangle = 1 by 3 (6)

$A = 18$

$41.4\ ft^2$ area needed for table cloth

$\boxed{8\text{-}74}$

$x^2 + 7x + k$ factorable if k is

$\frac{4}{21}$ factorable

19%

$\begin{cases} 0 \\ 6 \\ 12 \\ 10 \end{cases}$

$\boxed{8\text{-}75}$

a) I think the second spinner because it guarantees points

(1)

$\frac{1}{4}(0) + \frac{1}{4}(0) + \frac{1}{4}(0) + \frac{1}{4}(20)$

5 expected value

(2)

$\frac{1}{2}(10) + \frac{1}{2}(5)$

$5 + 2.5$

expected value 7.25

b) $\frac{1}{4}(100) = 25$ yes

expected value

8-76

Same Area

$$4x^2 = (x+10)(2x-3)$$

$$4x^2 = 2x^2 - 3x + 20x - 30$$

$$4x^2 = 2x^2 + 17x - 30$$

$$2x^2 - 17x + 30 = 0$$

Factor

	x	-6
$2x$	$2x^2$	$-12x$
-5	$-5x$	30

$$(2x-5)(x-6) = 0$$

Zero Product Property

$2x - 5 = 0$ $\quad$ $x - 6 = 0$

$2x = 5$

$x = 2.5$ $\quad$ $x = 6$

two answers

8-77

$$\sin\theta = \frac{70}{100}$$

$$\sin^{-1}\left(\frac{70}{100}\right) = \theta$$

$$\theta \approx 44.43$$

B