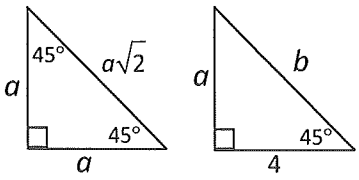
Name: _____ Date: _____ Hour: _____

Special Right Triangles

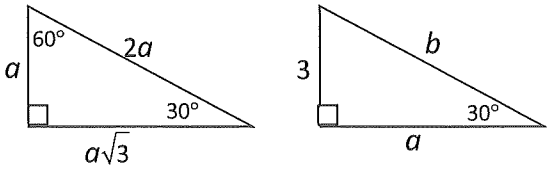
Isosceles Right Triangle



$a = 4$

$b = 4\sqrt{2}$

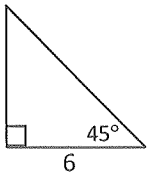
30-60-90 Triangle

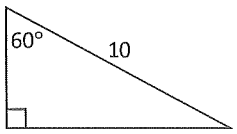


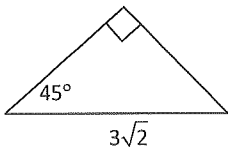
$a = 3\sqrt{3}$

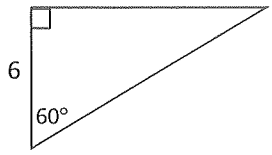
$b = 2 \cdot 3 = 6$

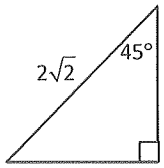
Find the missing sides.

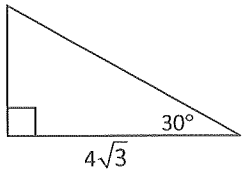
1. 

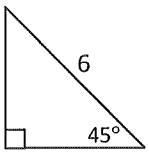
2. 

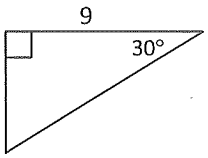
3. 

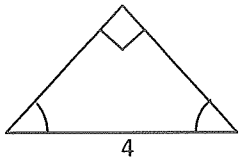
4. 

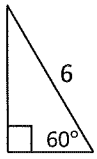
5. 

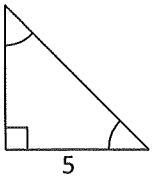
6. 

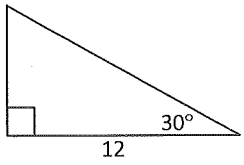
7. 

8. 

9. 

10. 

11. 

12. 

Cross out the correct answers. The remaining letters (one per space) complete the statement.

5 EQ	9 HA	$6\sqrt{2}$ UA	3 LT	10 LF	$3\sqrt{2}$ OT	3 HE	$4\sqrt{3}$ SQ	$3\sqrt{2}$ UA	12 RE	$2\sqrt{2}$ RO
$6\sqrt{3}$ OT	$5\sqrt{3}$ OF	25 TH	$3\sqrt{3}$ ER	$6\sqrt{3}$ AD	5 IU	20 EH	3 SO	$3\sqrt{3}$ FT	36 YP	2 PY
11 OT	4 TH	16 EN	6 AG	8 OR	32 US	$5\sqrt{2}$ AS	2 TH	7 E.	$8\sqrt{3}$ T.	$2\sqrt{2}$ S.

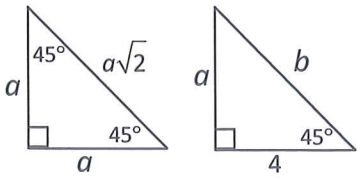
In a 30-60-90 degrees right triangle, the side opposite the 30-degree angle is

___ ___

Name: Key Date: _____ Hour: _____

Special Right Triangles

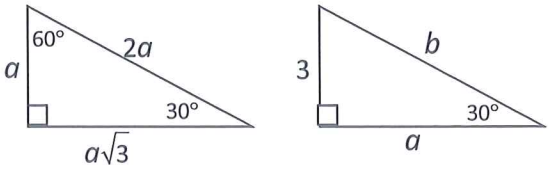
Isosceles Right Triangle



$a = 4$

$b = 4\sqrt{2}$

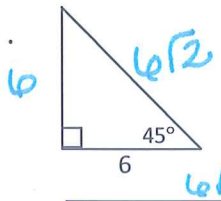
30-60-90 Triangle

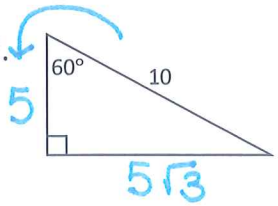


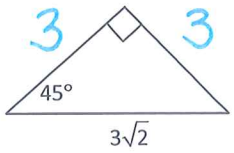
$a = 3\sqrt{3}$

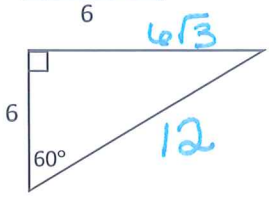
$b = 2 \cdot 3 = 6$

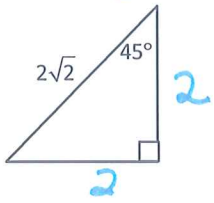
Find the missing sides.

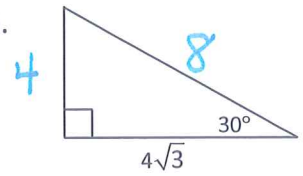
1. 

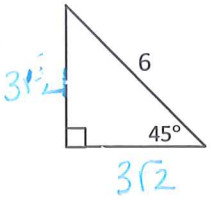
2. 

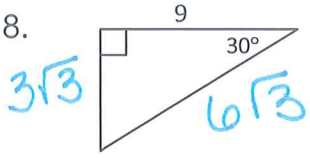
3. 

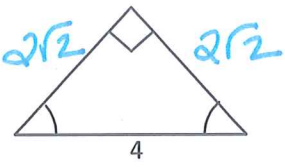
4. 

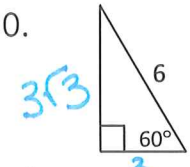
5. 

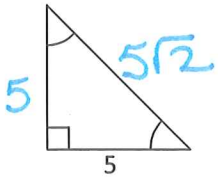
6. 

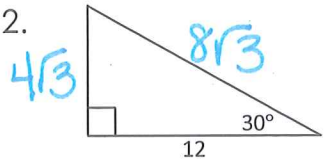
7. 

8. 

9. 

10. 

11. 

12. 

Cross out the correct answers. The remaining letters (one per space) complete the statement.

~~5 EQ~~	9 HA	~~$6\sqrt{2}$ UA~~	~~3 LT~~	10 LF	~~$3\sqrt{2}$ OT~~	~~3 HE~~	~~$4\sqrt{3}$ SQ~~	~~$3\sqrt{2}$ UA~~	~~12 RE~~	~~$2\sqrt{2}$ RO~~
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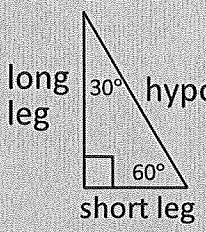
11 OT	~~4 TH~~	16 EN	~~6 AG~~	~~8 OR~~	32 US	~~$5\sqrt{2}$ AS~~	~~2 TH~~	7 E.	~~$8\sqrt{3}$ T.~~	~~$2\sqrt{2}$ S.~~

In a 30-60-90 degrees right triangle, the side opposite the 30-degree angle is

HALF THE HYPOTENUSE.

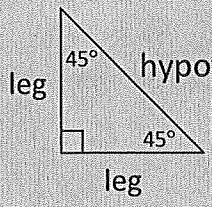
Special Right Triangles



$$\text{short leg} = \frac{1}{2} \cdot \text{hypotenuse}$$

$$\text{long leg} = \sqrt{3} \cdot (\text{short leg})$$

$$\text{hypotenuse} = 2 \cdot (\text{short leg})$$

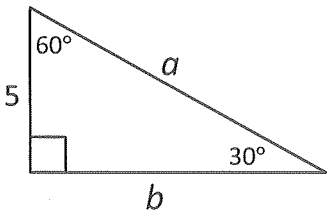


legs are equal

$$\text{hypotenuse} = \sqrt{2} \cdot (\text{leg})$$

Use the 30-60-90 and 45-45-90 triangle relationships to solve for the missing sides. Use the answers to reveal the name of the team that Abraham M. Saperstein established and sent on the road in 1927.

1



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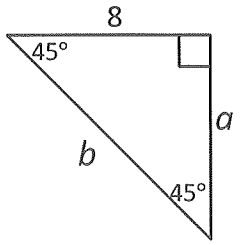

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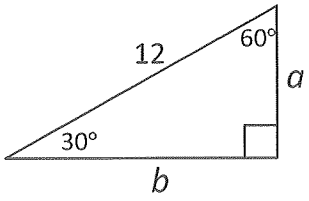

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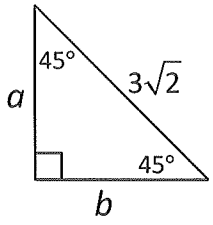

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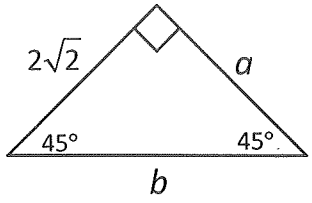

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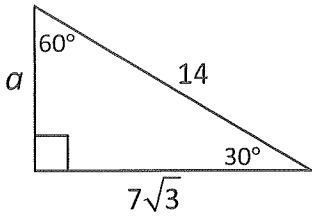

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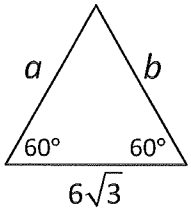

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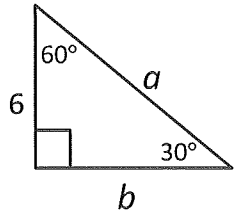
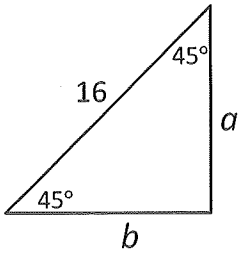


9



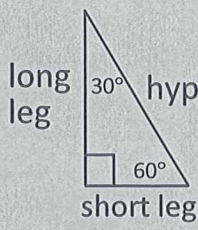
8	$2\sqrt{2}$	3	6	$5\sqrt{3}$	4	7	12	$8\sqrt{2}$	10	$6\sqrt{3}$
A	B	E	G	H	L	M	O	R	S	T

8b	1b	4a	1b	2a	9b	5b	4b	6a	

3a	5b	8a	5a	4a	7a	2b	8a	7b	3b	4b	9a	1a

Special Right Triangles

Key



$$\text{short leg} = \frac{1}{2} \cdot \text{hypotenuse}$$

$$\text{long leg} = \sqrt{3} \cdot (\text{short leg})$$

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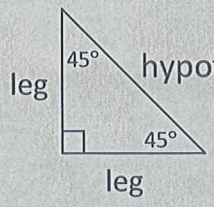

legs are equal

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Use the 30-60-90 and 45-45-90 triangle relationships to solve for the missing sides. Use the answers to reveal the name of the team that Abraham M. Saperstein established and sent on the road in 1927.

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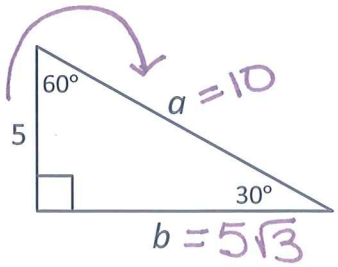

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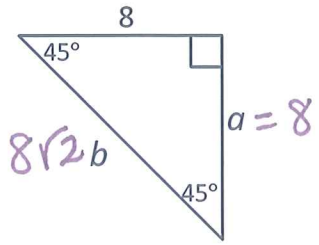

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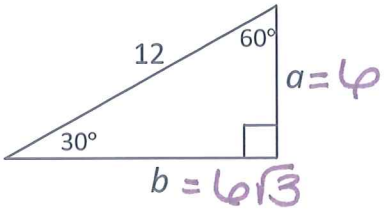

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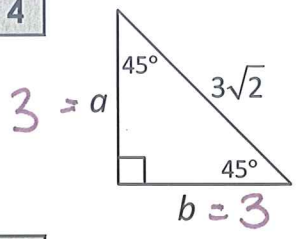

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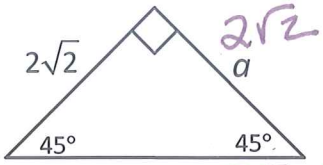

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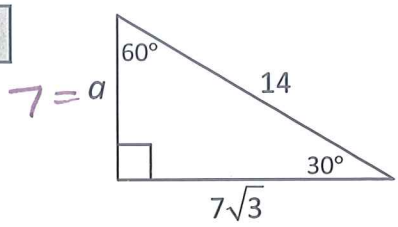

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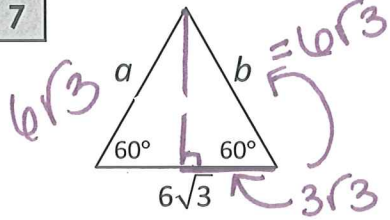

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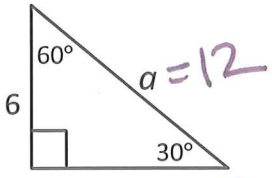
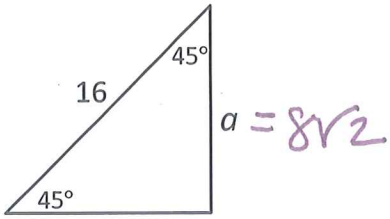


9



8	$2\sqrt{2}$	3	6	$5\sqrt{3}$	4	7	12	$8\sqrt{2}$	10	$6\sqrt{3}$
A	B	E	G	H	L	M	O	R	S	T

T	H	E	H	A	R	L	E	M
8b	1b	4a	1b	2a	9b	5b	4b	6a

G	L	O	B	E	T	R	O	T	T	E	R	S
3a	5b	8a	5a	4a	7a	2b	8a	7b	3b	4b	9a	1a