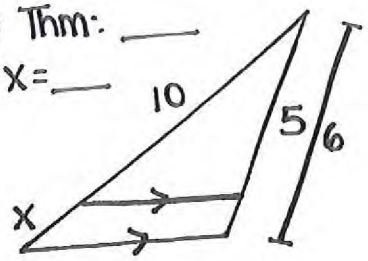
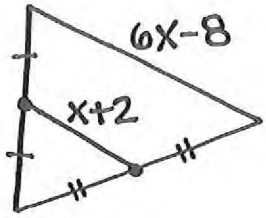
Triangle Theorems Practice

Directions: state the theorem that you will use to find X and then find x. (Show your work.) When stating the theorem that you will use, write (A) for Triangle Sum Theorem, (B) for Isosceles Triangle Theorem, (C) for Triangle Midsegments Theorem, and (D) Triangle Proportionality Theorem.

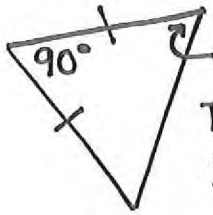
① Thm: ____
X= ____



② Thm:
____
X=
____

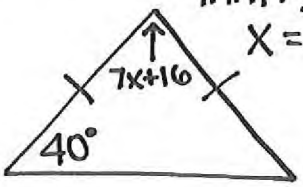


③

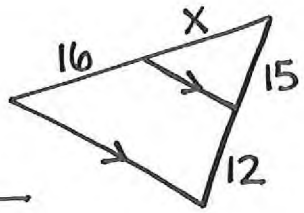


Thm: ____
X= ____

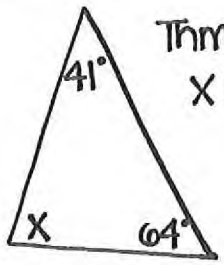
④ Thm: ____
X= ____



⑤ Thm:
____
X= ____

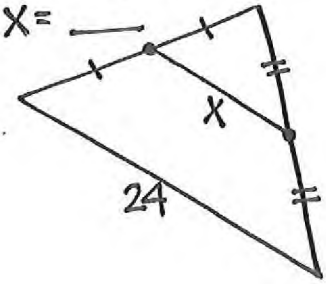


⑥

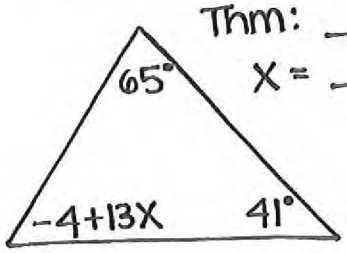


Thm: ____
X= ____

⑦ Thm: ____
X= ____

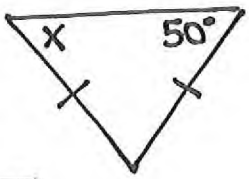


⑧



Thm: ____
X= ____

⑨



Thm:
____
X= ____

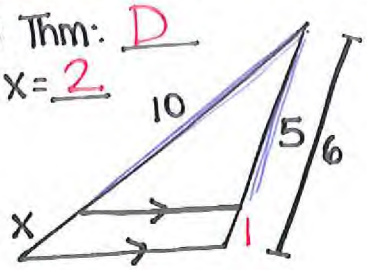
Triangle Theorems Practice

Key 32

Directions: state the theorem that you will use to find x and then find x. (Show your work.) When stating the theorem that you will use, write (A) for Triangle Sum Theorem, (B) for Isosceles Triangle Theorem, (C) for Triangle Midsegments Theorem, and (D) Triangle Proportionality Theorem.

① Thm: D

x = 2



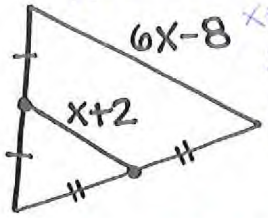
$\frac{10}{x} = \frac{5}{1}$

$5x = 10$

$x = 2$

② Thm: C

x = 3



$x+2 = \frac{1}{2}(6x-8)$

$x+2 = 3x-4$

$2 = 2x-4$

$6 = 2x$

$3 = x$

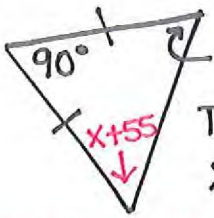
$6x-8 = 2(x+2)$

$6x-8 = 2x+4$

$4x = 12$

$x = 3$

③



Thm: B+A

x = -10

$x+55+x+55+90 = 180$

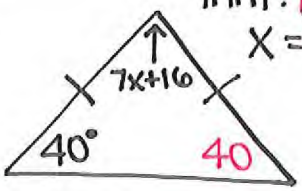
$2x+200 = 180$

$2x = -20$

$x = -10$

④ Thm: B+A

x = 12



$40+40+7x+16 = 180$

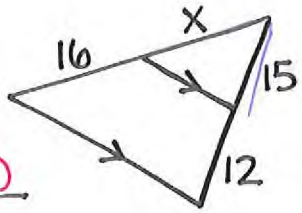
$7x+96 = 180$

$7x = 84$

$x = 12$

⑤ Thm: D

x = 20



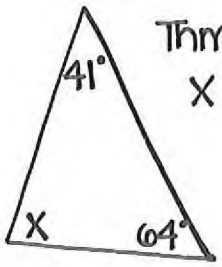
$\frac{x}{16} = \frac{15}{12}$

$12x = 240$

$x = 20$

⑥ Thm: A

x = 75



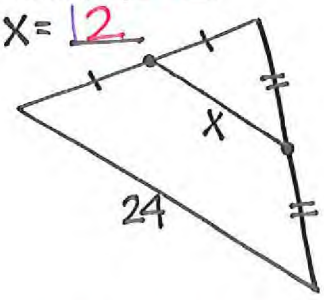
$41+64+x = 180$

$x+105 = 180$

$x = 75$

⑦ Thm: C

x = 12

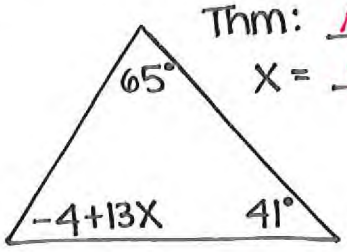


$24 = 2(x)$

$12 = x$

⑧ Thm: A

x = 6



$65+41+(-4)+13x = 180$

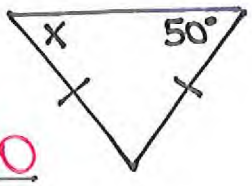
$13x+102 = 180$

$13x = 78$

$x = 6$

⑨ Thm: B

x = 50



$x = 50$