

HOMWORK #2 - SOLUTIONS

SECTION 1.4

SECTION 1.5

(24) Hypothesis:
A triangle is equilateral
Conclusion:
The triangle is equiangular

(28) The given statement is:
if two angles are right angles,
then they are congruent.

Hypothesis:
Two angles are right angles
Conclusion:
The angles are congruent

- (4) 1. $m\angle 1 + m\angle 2 = 180^\circ$
2. given in the figure
(Adj \angle 's whose common sides are in a line are supplementary)
3. definition of supplementary \angle 's
4. Substitution (2,3)
OR symmetric and Transitive prop of =
5. Addition-subtraction property of =
6. Definition of vertical \angle 's
7. $m\angle 4 = m\angle 2$
8. $m\angle 4 = m\angle 3$

SECTION 1.2

SECTION 1.6

- (24) 2. Multiplication/Division property of equality
3. Distributive law
4. Addition/Subtraction property of equality
6. Symmetric property of =
7. Substitution

- (26) 1. \overrightarrow{BD} bisects $\angle ABC$
2. Definition of bisector
3. Angle-Addition Postulate
4. Substitution (2,3)
5. $2m\angle ABD = m\angle ABC$
6. Multiplication/Division property of equality.

SECTION 1.3

SECTION 2.1

- | | |
|------------|------------|
| (2) False | (14) False |
| (4) False | (16) True |
| (6) True | (18) False |
| (8) True | (20) True |
| (10) False | |
| (12) True | |

- (2) $\overline{DF}, \overline{FE}, \overline{DE}$
- (4) isosceles Δ 's
- (6) \overline{DF}
- (8) $\angle D$
- (10) no hypotenuse since it's not a right Δ