

CHAPTER 5 REVIEW WORKSHEET

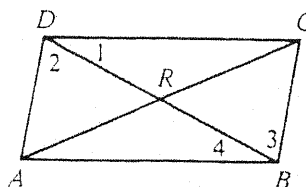
Remember to organize and show all of your work.

Complete each statement with the word *always*, *sometimes*, or *never*.

1. A rectangle is ? a square. sometimes
2. The diagonals of a square are ? perpendicular. always
3. A rhombus is ? equiangular. sometimes
4. If $\overline{AD} \parallel \overline{BC}$ and $\overline{AB} \cong \overline{CD}$, then quadrilateral $ABCD$ is ? a parallelogram. sometimes
5. A trapezoid ? has congruent bases. never

Quadrilateral $ABCD$ is a parallelogram. Complete.

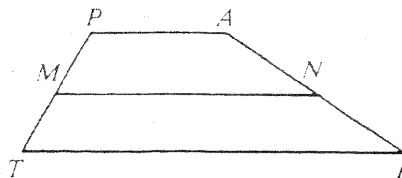
6. If $DC = 8$ and $AD = 6$, then $AB = \underline{8}$ and $BC = \underline{6}$
7. If $RC = 10$ and $DR = 7$, then $BD = \underline{14}$ and $AR = \underline{10}$
8. If $m\angle CDA = 100$, then $m\angle ABC = \underline{100}$ and $m\angle DAB = \underline{80}$
9. If $m\angle 1 = 30$ and $m\angle 2 = 40$, then $m\angle 3 = \underline{40}$ and $m\angle 4 = \underline{30}$



Exs. 6-9

Trapezoid $TRAP$ has median \overline{MN} .

10. If $m\angle T = 60$ and $m\angle A = 150$, then $m\angle P = \underline{120}$ and $m\angle R = \underline{30}$
11. If $PM = 12$ and $NR = 15$, then $MT = \underline{12}$ and $AN = \underline{15}$
12. If $PA = 3x - 6$, $MN = x + 5$, and $TR = 5x - 2$, then $x = \underline{3}$

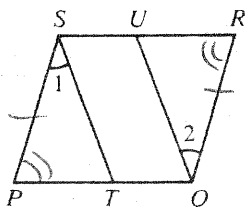


Exs. 10-12

Complete.

13. The segment that joins the midpoints of two sides of a triangle is parallel to the third side and half as long as the third side.
14. If two lines are parallel, then all points on one line are equidistant from the other line.

15. Given: $\square PQRS$; $\angle 1 \cong \angle 2$
 Prove: $\overline{ST} \cong \overline{QU}$

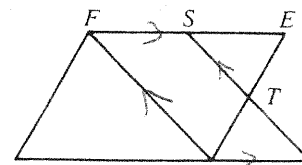


1. $\square PQRS$, $\angle 1 \cong \angle 2$
2. $SP \cong QR$
3. $\angle P \cong \angle R$
4. $\triangle SPT \cong \triangle QRU$
5. $\overline{ST} \cong \overline{QU}$

1. GIVEN
2. opp. sides of \square are \cong
3. opp. \angle s of \square are \cong
4. ASA
5. CPCTC

16. Given: $\square CDEF$; S and T are the midpoints of \overline{EF} and \overline{ED} .

Prove: $\overline{SR} \cong \overline{FD}$



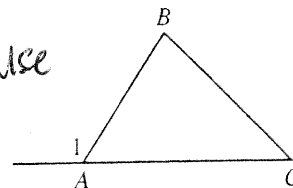
1. GIVEN
2. Def of \square
3. If a segment joins 2 midpts half it is \parallel to 3rd side
4. Def of \square

1. GIVEN
2. Def of \square
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4. Def of \square

CHAPTER 6 REVIEW WORKSHEET

Classify each statement as true or false.

1. $m\angle 1 = m\angle BAC + m\angle B$ *False* 2. $m\angle B + m\angle C > m\angle 1$ *False*
 3. $m\angle 1 < m\angle B$ *False* 4. $m\angle 1 > m\angle C$ *True*



Consider the true statement: Two skew lines do not intersect.

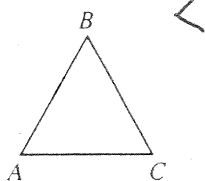
5. Write the statement in if-then form. *if 2 lines are skew then they do not intersect*
 6. Write the converse. Is the converse true or false? *if 2 lines do not intersect, then they are skew FALSE*
 7. Write the inverse. Is the inverse true or false? *if 2 lines are not skew then they intersect FALSE*
 8. Write the contrapositive. Is the contrapositive true or false? *if 2 lines intersect then they are not skew TRUE*

Complete each sentence on how to write an indirect proof.

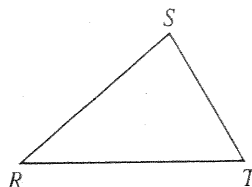
9. Assume temporarily that the conclusion is ? not true
 10. Reason logically until you reach a contradiction of a ? known fact
 11. Point out that the temporary assumption must be false, and that the conclusion must then be true
 12. To write an indirect proof of "If x is an integer and x^2 is even, then x is even," you begin by writing: Assume temporarily that x is odd

Complete each statement by writing $<$, $=$, or $>$. In Exercises 13 and 15 the diagrams are not drawn to scale.

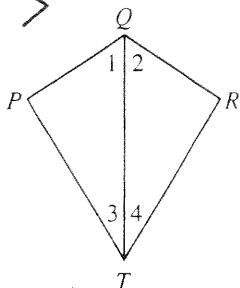
13. If $BC > AC$, then $m\angle B$? < $m\angle A$.



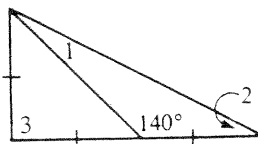
14. $RS + ST$? > RT



15. If $\overline{PQ} \cong \overline{RQ}$ and $PT > TR$, then $m\angle 1$? > $m\angle 2$.



16. Use $m\angle 1$, $m\angle 2$, and $m\angle 3$ to complete: ? > ? > ?
 $m\angle 3 > m\angle 2 > m\angle 1$



17. The lengths of two sides of a triangle are 16 and 10. The length of the third side must be greater than $\frac{?}{6}$, but less than $\frac{?}{26}$.

CHAPTER 7 REVIEW WORKSHEET

1. Express the ratio $\frac{9}{12}$ in simplest form. $\frac{3}{4}$
2. Find the value of x if: a. $\frac{7}{8} = \frac{x}{12}$ b. $\frac{9}{x+1} = \frac{6}{x}$ a) $10\frac{1}{2}$ b) 2
3. If $\triangle ABC \sim \triangle DEF$, then $\angle B \cong \angle E$ and $\frac{AB}{DE} = \frac{AC}{DF}$

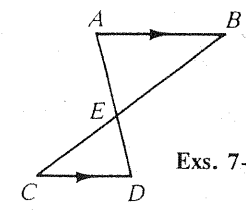
4. If $\frac{a}{b} = \frac{4}{9}$, then:
 a. $\frac{a}{4} = \frac{?}{?}$ b. $\frac{a+b}{b} = \frac{?}{?}$ c. $\frac{3a}{4} = \frac{?}{?}$ a) $\frac{b}{9}$ b) $\frac{13}{9}$ c) $3b$

5. $ABCD$ and $EFGH$ are squares with $AB = 3$ and $EF = 5$. Find, in simplest form, the ratio of:
 a. the length of a side of $ABCD$ to its perimeter $\frac{1}{4}$
 b. the perimeter of $ABCD$ to the perimeter of $EFGH$ $\frac{3}{5}$
6. The ratio of the measures of the angles of a triangle is 1:4:7. Find the measure of the largest angle. 105

7. What postulate or theorem justifies the statement $\triangle ABE \sim \triangle DCE$? AA ~

8. a. $\frac{AE}{DE} = \frac{BE}{CE}$ b. $\frac{AE}{AB} = \frac{DE}{DC}$

9. The scale factor $\triangle AEB$ to $\triangle DEC$ is 5:2. If $DE = 7$, then $AE = 17\frac{1}{2}$

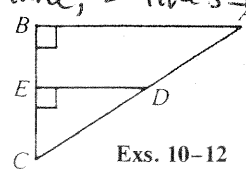


$\frac{2}{5} = \frac{7}{x}$
 $2x = \frac{35}{2} = 17\frac{1}{2}$

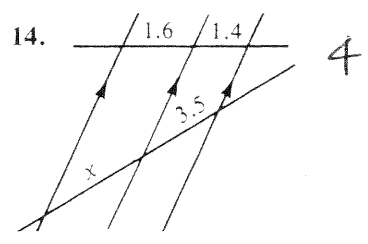
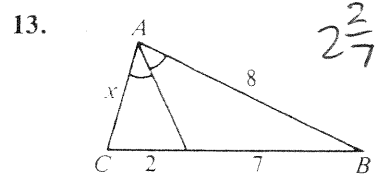
10. What postulate or theorem justifies each statement?
 a. $\overline{AB} \parallel \overline{DE}$ b. $\frac{CD}{DA} = \frac{CE}{EB}$ a) In a plane, 2 lines \perp to same line are \parallel to each other or if corr. \angle s are \cong then lines \parallel
 b) \triangle Prop. Theorem

11. If $CD = 4$, $DA = 3$, and $DE = 3$, then $AB = ?$ $5\frac{1}{4}$

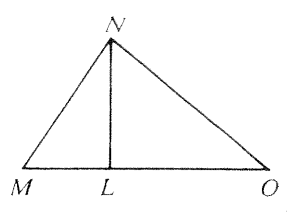
12. If $CB = 12$, $EB = 8$, and $CD = 6$, then $DA = ?$ 12



Find the value of x .



15. Given: $\overline{MN} \perp \overline{NO}$; $\overline{MO} \perp \overline{LN}$
 Prove: $MN \cdot LN = ML \cdot NO$



1. $\overline{MN} \perp \overline{NO}$ 1. GIVEN
 $\overline{MO} \perp \overline{LN}$
2. $\angle MNO + \angle MLN$ 2. Def of \perp lines
 are Rt. \angle s
3. $m\angle MNO = m\angle MLN = 90$ 3. Def of a Rt. \angle
4. $\angle MNO \cong \angle MLN$ 4. Def of $\cong \angle$ s
5. $\angle N \cong \angle M$ 5. Reflexive
6. $\triangle MNO \cong \triangle MLN$ 6 AA ~
7. $\frac{MN}{ML} = \frac{NO}{LN}$ 7. corr sides of $\sim \Delta$ s are prop
8. $MN \cdot LN = ML \cdot NO$ 8. mean-Extremes Prop.

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 Assignment #: _____

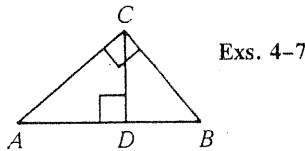
CHAPTER 8 REVIEW WORKSHEET

Find the geometric mean between the numbers.

1. 8 and 18 12 2. 9 and 80 $12\sqrt{5}$
 3. Simplify the radical expressions.
 a. $\sqrt{75}$ $5\sqrt{3}$ b. $\frac{2}{\sqrt{3}}$ $\frac{2\sqrt{3}}{3}$

In the diagram, $\angle ACB$ is a right angle and $\overline{CD} \perp \overline{AB}$.

4. $\triangle ADC \sim \triangle \underline{ACB}$, and $\triangle ADC \sim \triangle \underline{CDB}$
 5. CD is the geometric mean between \underline{AD} and \underline{DB}
 6. CB is the geometric mean between \underline{AB} and \underline{DB}
 7. If $AD = 9$ and $CD = 6$, then $DB = \underline{4}$.



Tell whether a triangle formed with sides having the lengths named is acute, obtuse, or right. If a triangle can't be formed, write *not possible*.

8. 2, 7, 10 not possible 9. 6, 6, 2 acute 10. 5, 12, 13 right 11. 5, 8, 15 not possible

Find the value of x .

