| Notes | Chapter 08: Right Angles Unit 1: Right Triangles Section 1: Similarity in Right Triangles |
|--------------|---|
| on your desk | Pocall that |
| | If a, b, and x are positive numbers and $\frac{a}{a} = \frac{x}{a}$, then x is called the geometric |
| 8.1 | mean between a and b. In other words, geometric mean of a and b is equal |
| 8.2 | to \sqrt{ab} . |
| <u>8.3</u> | |
| <u>8.4</u> | Theorem 8–1 |
| | If the altitude is drawn to the hypotenuse of a right triangle, then the two |
| <u>8.5</u> | triangle formed are similar to the original triangle and to each other. |
| <u>8.6</u> | Given: $\triangle ABC$ with rt. $\angle ACB$; altitude segment CN |
| <u>8.7</u> | Prove: $\triangle ACB \sim \triangle ANC \sim \triangle CNB$ |
| | |
| | |
| | A N B |
| | |
| | |
| | |
| | |
| | 1 |

| Notes | Chapter 08: Right Angles Unit 1: Right Triangles Section 1: Similarity in Right Triangles |
|---------------------|---|
| <u>on your desk</u> | Corollary 1 |
| | When the altitude is drawn to the hypotenuse of a right triangle, the length |
| <u>8.1</u> | of the altitude is the geometric mean between the segments of the |
| <u>8.2</u> | hypotenuse. Ç |
| <u>8.3</u> | Given: $\triangle ABC$ with rt. $\angle ACB$; altitude segment CN |
| <u>8.4</u> | Prove: AN+BN=CN ² |
| | |
| <u>8.5</u> | A N B |
| <u>8.6</u> | |
| <u>8.7</u> | Corollary 2 |
| | When the altitude is drawn to the hypotenuse of a right triangle, each leg is |
| | the geometric mean between the hypotenuse and the segment of the |
| | hypotenuse that is adjacent to that leg. |
| | Given: $\triangle ABC$ with rt. $\angle ACB$; altitude segment CN |
| | Prove: (1) $AB \cdot AN = AC^2$; (2) $AB \cdot BN = BC^2$ |
| | |
| | A N B |
| | 2 |

| Notes | Chapter 08: Ríght Anglé Unit 1: Ríght Triangles Section 1: Similarity in Right T | 25 ŕíangles | | |
|---------------------|--|--------------------------------|----------|---|
| <u>on your desk</u> | Example | | | |
| | 1. If $IR=16$ and $FI=9$, find HI | . RF. RH. and HF. | | |
| 8.1 | ······································ | ,,, | Ą | |
| 8.2 | | | \wedge | |
| <u>8.3</u> | | | | |
| <u>8.4</u> | 3. If JR=4 and JH=2, find JE, | RE, RH, and HE. | | R |
| 8.5 | | | 5 | |
| 8.6 | | | | |
| <u>8.7</u> | 4. Simplify each expression. | Ē | | |
| | (a) $\sqrt{75}$ | (b) $\sqrt{\frac{2}{5}}$ | | |
| | | 15 | | |
| | | | | |
| | (c) 2 √48 | (d) $\sqrt{16} \cdot \sqrt{4}$ | | |
| | | | | |
| | | | | |
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| | | | | 3 |
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| Notes | Chapter 08: 1 Unit 1: Right Tr Section 1: Simila | Right Angles ^{iangles} rity in Right Triangles | | |
|---------------------|--|---|-----|--------|
| <u>on your desk</u> | <u>Practice</u> | | | |
| | Simplify. | 0 | | |
| <u>8.1</u> | 1. 3√50 | 4. $\frac{8}{2\sqrt{2}}$ | P | |
| <u>8.2</u> | | ZNZ | | |
| <u>8.3</u> | 2. $\sqrt{7} \cdot \sqrt{14}$ | 5. $\sqrt{45} \cdot \sqrt{5}$ | | |
| <u>8.4</u> | 12 | | | \leq |
| | 3. $\frac{12}{\sqrt{3}}$ | 6. $\sqrt{\frac{5}{4}}$ | R S | Q |
| <u>8.5</u> | V 2 | Y I | | |
| <u>8.6</u> | | | | |
| <u>8.7</u> | 7. If RS=2 and | SQ=8, find PS. | | |
| | | | | |
| | | | | |
| | 8. If RP=10 an | d RS=5, find SQ. | | |
| | | | | |
| | | | | |
| | 9. If RS=4 and | PS=6, find SQ. | | |
| | | | | |
| | | | | 4 |

| on your desk Theorem 8.2 (Pythagorean Theorem) In a right triangle, the square of the hypotenuse is equal to the sum of the 8.1 squares of the legs. 8.2 Given: ΔABC with rt. ∠ACB 8.3 Prove: 8.4 A Statements Reasons 8.5 8.6 8.7 9 8.7 9 9 9 <th>Notes</th> <th>Chapter 08: Ríght Angles Unit 1: Right Triangles Section 2: The Pythagorean Theorem</th> <th></th> | Notes | Chapter 08: Ríght Angles Unit 1: Right Triangles Section 2: The Pythagorean Theorem | |
|---|---------------------|---|--|
| 8.1 squares of the legs. 8.2 Given: $\triangle ABC$ with rt. $\angle ACB$ 8.3 Prove: 8.4 A Statements Reasons 8.5 B 8.6 B 8.7 A 8.6 B 8.7 A 8.6 B 8.7 A 8.7 A 8.6 B 8.7 A 9.7 <t< th=""><th><u>on your desk</u></th><th>Theorem 8.2 (Pythagorean Theorem In a right triangle, the square of the</th><th>) hypotenuse is equal to the sum of the</th></t<> | <u>on your desk</u> | Theorem 8.2 (Pythagorean Theorem In a right triangle, the square of the |) hypotenuse is equal to the sum of the |
| 8.2 Given: △ABC with rt. ∠ACB 8.3 Prove: 8.4 A Statements Reasons 8.6 8.7 8.7 | <u>8.1</u> | squares of the legs. | C, |
| 8.3 Prove: 8.4 A B Statements Reasons B 8.5 8.6 8.7 Image: Constraint of the second s | <u>8.2</u> | Given: $\triangle ABC$ with rt. $\angle ACB$ | |
| 8.4 A B Statements Reasons 8.5 8.6 8.7 9 9.7 9 | <u>8.3</u> | Prove: | |
| Statements Reasons 8.5 | <u>8.4</u> | | AB |
| 8.5 Image: Section of the section o | | Statements | Reasons |
| 8.6 | <u>8.5</u> | | |
| 8.7 | <u>8.6</u> | | |
| Image: | <u>8.7</u> | | |
| | | | |
| Image: Sector | | | |
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| 5 | | | |
| 5 | | | |
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| Notes | Chapter 08: Right Angles Unit 1: Right Triangles Section 2: The Pythagorean Theorem |
|---------------------|---|
| <u>on your desk</u> | Practice_ |
| | Find the value of each variable. |
| <u>8.1</u> | 1. 4. Find the length of a diagonal |
| <u>8.2</u> | 2 of a rectangle with length 8 |
| <u>8.3</u> | and width 4. |
| <u>8.4</u> | 3 |
| 8.5 8.6 8.7 | $3. \qquad ^{\gamma} \qquad ^{4} \qquad 6$ |
| | 4. 4 x |
| | 7 |
| | |

| Notes | Chapter 08 Unit 1: Right 2 Section 3: The | : Right Angles Triangles Converse of the Pyt | thagorean Theorem | |
|---------------------|---|--|-----------------------|-------------------------|
| <u>on your desk</u> | Theorem 8.3 (| The Converse of tl | ne Pythagorean The | eorem) |
| | If the square o | of one side of a tria | angle is equal to th | e sum of the squares of |
| <u>8.1</u> | the other two | sides, then the tria | angle is a right tria | ngle. |
| <u>8.2</u> | | | | |
| <u>8.3</u> | | | | |
| <u>8.4</u> | Pythagorean T | riples Family | | |
| | 3, 4, 5 | 5, 12, 13 | 8, 15, 17 | 7, 24, 25 |
| <u>8.5</u> | 6, 8, 10 | | | |
| <u>8.6</u> | 9, 12, 15 | | | |
| <u>8.7</u> | | | | |
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| Nøtes | Chapter 08: I Unit 1: Right Tri Section 3: The Co | Ríght Angles angles nverse of the Pyt | hagorean Theore | m | | |
|---------------------|--|---|---|---------------------------------------|---|--|
| <u>on your desk</u> | How do you tell Hint 1: Most elo | if a triangle is ri quent theorem i | ght, obtuse, or a n Geometry. | acute? B | | |
| <u>8.1</u> | | | | | ··~. | |
| <u>8.2</u> | m∠C is right: | $c^2 = a^2 + b^2$ | | | `` `. | |
| <u>8.3</u> | m∠C is obtuse: | $c^2 > a^2 + b^2$ | į į | a | `````````````````````````````````````` | |
| <u>8.4</u> | $m \angle C$ is acute: | $c^2 < a^2 + b^2$ | · · · | | 1 | |
| | NOTE: c is the lo | ngest side. | 4 | <u> </u> | į | |
| <u>8.5</u> | | | | | ; | |
| <u>8.6</u> | | | | × | , i | |
| <u>8.7</u> | <u>Example</u> | | | · · · · · · · · · · · · · · · · · · · | - · · · · · · · · · · · · · · · · · · · | |
| | Determine if the following set of number form a triangle, then | | | | | |
| | decide if the tria | ngle is right, ob | tuse, or acute. | | | |
| | (a) 3,4,5 | (b) 3,4,6 | (c) 5,6,7 | | | |
| | | | | | | |
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| | | | | <u>Geometry Sk</u> | etchpad | |

| Notes | Chapter 08: Right Angles Unit 1: Right Triangles Section 3: The Converse of the Pythagorean Theorem |
|---------------------|---|
| <u>on your desk</u> | Example |
| | The sides of a triangle have the lengths given. Is the triangle acute, right, |
| <u>8.1</u> | or obtuse? |
| <u>8.2</u> | 1. 20, 21, 29 |
| <u>8.3</u> | |
| <u>8.4</u> | |
| | 2. 20, 21, 30 |
| <u>8.5</u> | |
| <u>8.6</u> | |
| <u>8.7</u> | 3. 20, 21, 28 |
| | |
| | |
| | 4. 5, 6, 8 |
| | |
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| | 10 |

| Notes | Chapter 08: Ríght Angles Unit 1: Right Triangles Section 3: The Converse of the Pythago | rean Theorem |
|---------------------|---|--------------------------------------|
| <u>on your desk</u> | <u>Practice</u> | |
| | Classify each triangle with sides of th | ne given lengths as acute, right, or |
| <u>8.1</u> | obtuse. | |
| <u>8.2</u> | 1. 5, 12, 14 | 6. Explain why ∠D must be a |
| <u>8.3</u> | | right angle. |
| <u>8.4</u> | | 13 3 |
| | 2. 6, 7, 8 | p < n |
| <u>8.5</u> | | |
| <u>8.6</u> | | ~ |
| <u>8.7</u> | 3. √3, √4, √5 | |
| | | 7. Explain why $\angle P$ must be a |
| | | right angle. |
| | 4. 1, 3, √10 | R 9 6 P |
| | | 12/0 |
| | 5 9 40 41 | 15 10 Q |
| | יד, איז, איז, איז, איז, איז, איז, איז, איז | v |
| | | 11 |
| | | |

| Notes | Chapter 08: Right Angles Unit 1: Right Triangles Section 4: Special Right Triangles |
|---------------------|---|
| <u>on your desk</u> | Theorem 8.6 (45–45–90 Theorem) |
| | In a 45°-45°-90° triangle, the hypotenuse is times as long as a leg. |
| <u>8.1</u> | |
| <u>8.2</u> | 1 45 ×12 |
| <u>8.3</u> | 2 |
| <u>8.4</u> | 7 45 |
| <u>8.5</u> | |
| <u>8.6</u> | |
| <u>8.7</u> | Theorem 8.7 (45–45–90 Theorem) |
| | In a 30°-60°-90° triangle, the hypotenuse is twice as long as the shorter leg, |
| | and the longer leg is times as long as the shorter leg. |
| | 60° |
| | 22 |
| | l l l l l l l l l l l l l l l l l l l |
| | <u></u> |
| | 7.0 |
| | 12 |

| Notes | Chapter 08: Right Angles Unit 1: Right Triangles Section 4: Special Right Triangles |
|---------------------|---|
| <u>on your desk</u> | Example |
| | Find the value of y. |
| <u>8.1</u> | 1. Find the value of x. |
| <u>8.2</u> | |
| <u>8.3</u> | 45 6 |
| <u>8.4</u> | × |
| <u>8.5</u> | 7 45 X |
| <u>8.6</u> | 3. Find the value of x and y. |
| <u>8.7</u> | 60° |
| | Zo. T |
| | |
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| | |

| Notes | Chapter 08: Right Angles Unit 1: Right Triangles Section 4: Special Right Triangles |
|--------------|---|
| on your desk | Practice |
| | Complete |
| <u>8.1</u> | 1. If r=6, t= |
| <u>8.2</u> | |
| <u>8.3</u> | 2. If s=2√5 , t= |
| <u>8.4</u> | |
| | 3. If $t = \sqrt{2}$, $r = $ |
| <u>8.5</u> | |
| <u>8.6</u> | 4. If t=10, s= |
| <u>8.7</u> | |
| | Ν |
| | |
| | t |
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| | 7 45 |
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| | 14 |
| | |

| Notes | Chapter 08: Ríght Angles Unit 1: Right Triangles Section 4: Special Right Triangles | |
|---------------------|---|---|
| <u>on your desk</u> | Practice | |
| | Complete | Ĝ |
| <u>8.1</u> | 5. If q=8, p= and n= | |
| <u>8.2</u> | ľ | |
| <u>8.3</u> | 6. If n=20, q= and p= | |
| <u>8.4</u> | | |
| | 7. If p= 4√3, q= and n= | |
| <u>8.5</u> | | |
| <u>8.6</u> | 8. If p=9, q=, and n= | |
| <u>8.7</u> | | |
| | 9. A diagonal of a square has length 6. | |
| | What is the perimeter of the square? | |
| | | |
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| Notes | Chapter 08: Right Angles Unit 1: Right Triangles Section 4: Special Right Triangles |
|---------------------|---|
| <u>on your desk</u> | Practice |
| | Find the value of x. |
| <u>8.1</u> | $10. \qquad \checkmark$ |
| <u>8.2</u> | |
| <u>8.3</u> | X 8 X |
| <u>8.4</u> | |
| | X |
| <u>8.5</u> | |
| <u>8.6</u> | 11. 45 |
| <u>8.7</u> | 60° |
| | 45 |
| | $\not\sim$ |
| | <i>в</i> с |
| | 12. In regular hexagon ABCDEF, AB=8. Find AD and AC. |
| | |
| | |
| | |
| | F 16 |



EX Find the sine, cosine, and tangent of 53°

| θ | sin(•) | cos(•) | tan(•) | • | sin(•) | cos(•) | tan(•) |
|----|--------|--------|--------|----|--------|--------|--------|
| 0 | 0.000 | 1.000 | 0.000 | 45 | 0.707 | 0.707 | 1.000 |
| 1 | 0.017 | 1.000 | 0.017 | 46 | 0.719 | 0.695 | 1.036 |
| 2 | 0.035 | 0.999 | 0.035 | 47 | 0.731 | 0.682 | 1.072 |
| 3 | 0.052 | 0.999 | 0.052 | 48 | 0.743 | 0.669 | 1.111 |
| 4 | 0.070 | 0.998 | 0.070 | 49 | 0.755 | 0.656 | 1.150 |
| 5 | 0.087 | 0.996 | 0.087 | 50 | 0.766 | 0.643 | 1.192 |
| 6 | 0.105 | 0.995 | 0.105 | 51 | 0.777 | 0.629 | 1.235 |
| 7 | 0.122 | 0.993 | 0.123 | 52 | 0.788 | 0.616 | 1.280 |
| 8 | 0.139 | 0.990 | 0.141 | 53 | 0.799 | 0.602 | 1.327 |
| 9 | 0.156 | 0.988 | 0.158 | 54 | 0.809 | 0.588 | 1.376 |
| 10 | 0.174 | 0.985 | 0.176 | 55 | 0.819 | 0.574 | 1.428 |
| 11 | 0.191 | 0.982 | 0.194 | 56 | 0.829 | 0.559 | 1.483 |
| 12 | 0.208 | 0.978 | 0.213 | 57 | 0.839 | 0.545 | 1.540 |
| 13 | 0.225 | 0.974 | 0.231 | 58 | 0.848 | 0.530 | 1.600 |
| 14 | 0.242 | 0.970 | 0.249 | 59 | 0.857 | 0.515 | 1.664 |
| 15 | 0.259 | 0.966 | 0.268 | 60 | 0.866 | 0.500 | 1.732 |

| Notes | Chapter 08: Ríght Angles Unit 2: Trígonometry |
|---------------------|---|
| | Section 5: The Tangent Ratio |
| <u>on your desk</u> | 3. Find the value of x to the nearest tenth. |
| | 20 |
| <u>8.1</u> | X |
| <u>8.2</u> | |
| <u>8.3</u> | 7 |
| <u>8.4</u> | |
| | |
| <u>8.5</u> | 4. The grade of a road is the ratio of its rise to its run and is usually given |
| <u>8.6</u> | as a decimal or percent. Find the angle that the road makes with the |
| <u>8.7</u> | horizontal if its grade is 4% (4/100). |
| | |
| | x° rise |
| | run |
| | |
| | |
| | |
| | 19 |
| | |

| Notes | Chapter 08: Ríght Angles Unit 2: Trigonometry Section 5: The Tangent Ratio | |
|---------------------|--|---|
| <u>on your desk</u> | Problem | |
| | Find x to the nearest tenth. | Find y° correct to the nearest degree. |
| <u>8.1</u> | 110 | 38 |
| <u>8.2</u> | 35° L | |
| <u>8.3</u> | × | 5 |
| <u>8.4</u> | | LY |
| | | |
| <u>8.5</u> | | |
| <u>8.6</u> | ~ | • |
| 8.7 | 2. 30 21° x | 4. <u>6</u> <u>8</u> <u>y</u> ° <u>10</u> |
| | | 20 |

| Notes | Chapter 08: Right Angles Unit 2: Trigonometry Section 6: The Sine and Cosine Ratios |
|---------------------|---|
| <u>on your desk</u> | sine of $\angle A = \frac{\text{opposite leg}}{1}$ |
| 8.1 | hypotenuse |
| 8.2 | cosine of $\angle A = \frac{\text{adjacent leg}}{\text{hypotenuse}}$ |
| <u>8.3</u> | adjacent leg |
| <u>8.4</u> | |
| <u>8.5</u> | SOH-CAH-TOA |
| <u>8.6</u> | "sine is opposite over hypotenuse - cosine is adjacent over hypotenuse - |
| <u>8.7</u> | tangent is opposite over adjacent" |
| | |
| | |
| | |
| | |
| | |
| | |
| | 21 |

EX Angle A is an acute angle. Use the table to approximate the

| measure of angle A. | | | TABLE OF | TRIGONO | DME | TRIC R | ATIOS | | |
|--|----|--------|----------|---------|-----|--------|--------|--------|--------|
| | θ | sin(•) | cos(•) | tan(•) | | • | sin(•) | cos(•) | tan(•) |
| | 0 | 0.000 | 1.000 | 0.000 | | 45 | 0.707 | 0.707 | 1.000 |
| a. Sin A = 0.12 | 1 | 0.017 | 1.000 | 0.017 | | 46 | 0.719 | 0.695 | 1.036 |
| | 2 | 0.035 | 0.999 | 0.035 | | 47 | 0.731 | 0.682 | 1.072 |
| | 3 | 0.052 | 0.999 | 0.052 | | 48 | 0.743 | 0.669 | 1.111 |
| | 4 | 0.070 | 0.998 | 0.070 | | 49 | 0.755 | 0.656 | 1.150 |
| | 5 | 0.087 | 0.996 | 0.087 | | 50 | 0.766 | 0.643 | 1.192 |
| | 6 | 0.105 | 0.995 | 0.105 | | 51 | 0.777 | 0.629 | 1.235 |
| | 7 | 0.122 | 0.993 | 0.123 | | 52 | 0.788 | 0.616 | 1.280 |
| | 8 | 0.139 | 0.990 | 0.141 | | 53 | 0.799 | 0.602 | 1.327 |
| | 9 | 0.156 | 0.988 | 0.158 | | 54 | 0.809 | 0.588 | 1.376 |
| b. Cos A = 0.68 | 10 | 0.174 | 0.985 | 0.176 | | 55 | 0.819 | 0.574 | 1.428 |
| | 11 | 0.191 | 0.982 | 0.194 | | 56 | 0.829 | 0.559 | 1.483 |
| | 12 | 0.208 | 0.978 | 0.213 | | 57 | 0.839 | 0.545 | 1.540 |
| | 13 | 0.225 | 0.974 | 0.231 | | 58 | 0.848 | 0.530 | 1.600 |
| | 14 | 0.242 | 0.970 | 0.249 | | 59 | 0.857 | 0.515 | 1.664 |
| | 15 | 0.259 | 0.966 | 0.268 | | 60 | 0.866 | 0.500 | 1.732 |
| | 16 | 0.276 | 0.961 | 0.287 | | 61 | 0.875 | 0.485 | 1.804 |
| | 17 | 0.292 | 0.956 | 0.306 | | 62 | 0.883 | 0.469 | 1.881 |
| | 18 | 0.309 | 0.951 | 0.325 | | 63 | 0.891 | 0.454 | 1.963 |
| | 19 | 0.326 | 0.946 | 0.344 | | 64 | 0.899 | 0.438 | 2.050 |
| | 20 | 0.342 | 0.940 | 0.364 | | 65 | 0.906 | 0.423 | 2.145 |
| | l | | | | | | | | |
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| I. I | | | | | | | | | |

| Notes | Chapter 08: Right Angles Unit 2: Trigonometry Section 6: The Sine and Cosine Ratios | | |
|---------------------|---|----------------------------------|----|
| <u>on your desk</u> | Example | \wedge | |
| | 1. find the values of x and y to the | 3. | |
| <u>8.1</u> | nearest integer. | 5 5 | |
| <u>8.2</u> | у | | |
| <u>8.3</u> | 28° | B 4 C | |
| <u>8.4</u> | x 1000 | a) Find the measure of the three | |
| | | angles of $\triangle ABC$. | |
| <u>8.5</u> | | | |
| <u>8.6</u> | 2. Find x° correct to the nearest | | |
| <u>8.7</u> | degree. | | |
| | N | | |
| | x° 30 | b) Find the lengths of the three | |
| | | altitude of $\triangle ABC$. | |
| | | | |
| | 18 | | |
| | | | |
| | | | |
| | | | 23 |
| | | | |

| Notes | Chapter 08: Right Angles Unit 2: Trigonometry Section 6: The Sine and Cosine Ratios |
|---------------------|---|
| <u>on your desk</u> | Problem |
| | Find the value of each variable. |
| <u>8.1</u> | 1. <u>y</u> 3. <u>x</u> |
| <u>8.2</u> | 56° 4 5 10 |
| <u>8.3</u> | 12 × |
| <u>8.4</u> | |
| | |
| <u>8.5</u> | |
| <u>8.6</u> | 4. A guy wire is attached to the top of a |
| <u>8.7</u> | 2. 75 m tower and meets the ground at |
| | a 65° angle. How long is the wire? |
| | 20 75m |
| | 65° |
| | 24 |

| Notes | Chapter 08: Right Angles Unit 2: Trigonometry Section 7: Applications of Right Triangle | Trigonometry |
|--------------|---|--------------------------------|
| on your desk | borizontal | angle of depression 2° |
| <u></u> | | |
| 0 | | |
| <u>8.1</u> | | |
| <u>8.2</u> | angle of elevetion 2° | Aug. |
| <u>8.3</u> | angle of elevation 2 | horizontal |
| <u>8.4</u> | | |
| | If the top of the lighthouse is 25 m abo | ve sea level, the distance x |
| <u>8.5</u> | between the boat and the base of the light | ghthouse can be found in these |
| <u>8.6</u> | two ways: | |
| <u>8.7</u> | | |
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| Notes | Chapter 08: Right Angles Unit 2: Trigonometry Section 7: Applications of Right Triangle Trigonometry |
|---------------------|--|
| <u>on your desk</u> | Example |
| | 1. Draw a diagram showing a person who is 1.5 m tall standing 20m from |
| <u>8.1</u> | the base of a building. Also show that the top of the building with an |
| <u>8.2</u> | angle of elevation of 58°. Find the height of the building. |
| <u>8.3</u> | |
| <u>8.4</u> | |
| 0 - | |
| <u>8.5</u> | 2 A driven a 150 grade |
| <u>8.0</u> | 2. A driveway has a 15% grade. |
| <u>8.7</u> | a) What is the angle of elevation of the driveway? |
| | b) If the driveway is 12m long, about how much does it rise? |
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| | 26 |

| Notes | Chapter 08: Ríght Angles Unit 2: Trígonometry Section 7: Applications of Right Triangle Trígonometry | |
|---------------------|--|----|
| <u>on your desk</u> | Example | |
| | 3. A toboggan travels from point A at the top of the hill to the point B at | |
| <u>8.1</u> | the bottom. Because the steepness of the hill varies, the angle of | |
| <u>8.2</u> | depression from A to B is only an approximate measure of the hill's | |
| <u>8.3</u> | steepness. We can, however, think of this angle of depression as | |
| <u>8.4</u> | representing the average steepness. | |
| | a) If the toboggan travels 130m from A to B and the vertical descent | |
| <u>8.5</u> | AC is 50m, what the approximate angle of depression? | |
| <u>8.6</u> | | |
| <u>8.7</u> | | |
| | | |
| | b) Why is your answer approximate? | |
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| | C ' B | 27 |
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