Warm Up (in your notes)
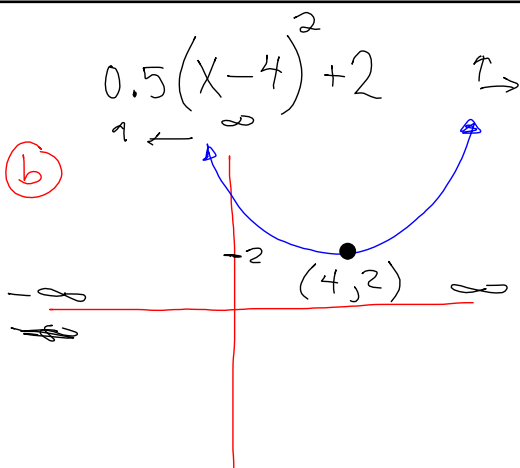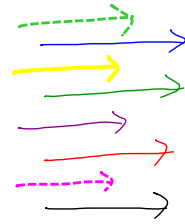
(a) Graph $y = 0.5(X-4)^2 + 2$
    using your GDC

(b) Sketch the graph

(c) List the Domain

(d) List the Range

HW Questions

$0.5(X-4)^2 + 2$

(b)

(4,2)

(c) domain:
    $-\infty < x < \infty$

(d) range:
    $2 \leq y < \infty$

(e) find $f(-1.75)$
    $= 18.53$

Agenda

① Geometry Review

② Start Review for
   Thursday's Quiz

Questions
   on
HW ?

(1b) $5x + 3y = 15$
           $-5x$ $5x$

(1e) $2 \cdot C = \cancel{2} \cdot \frac{1}{2} a x^2$

$$\frac{2c}{x^2} = \frac{a \cdot \cancel{x^2}}{\cancel{x^2}}$$

$$a = \frac{2c}{x^2}$$

5   a)

b) $X^3 \cdot X^3 \cdot X^2 = X^8$

c) $(n^4 w^2)(n^5 w^1) = n^4 \cdot n^5 \cdot w^2 \cdot w^1 = \boxed{n^9 w^3}$

d)

e)

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7   Factor $8n^2 - 10n - 3 = (2n-3)(4n+1)$

	$2n$	-3
$4n$	$8n^2$	$-12n$
1	$2n$	-3

$-24n^2$

$-10n$

$-n$ $24n$

$-2n$ $12n$

$2n$ $-12n$

$-4n$ $6n$

$4n$ $-6n$

$$\boxed{9} \quad (4)\frac{1}{4}x + \frac{4(1)}{2} = \frac{4(3)}{4}x - 2(4)$$
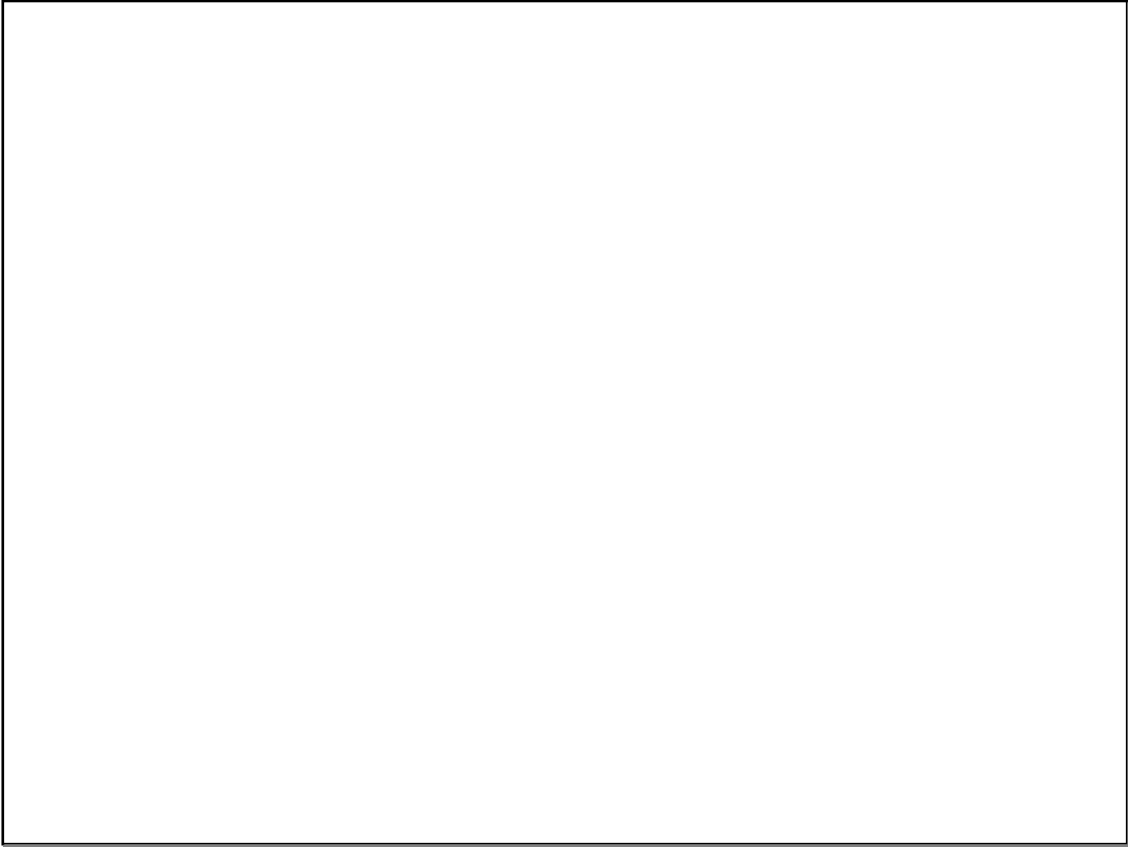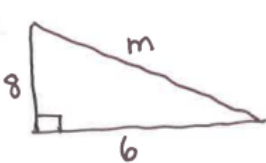
Pick
UP
the
Handout

Analyze
Right Triangles

Two helpful friends → $a^2 + b^2 = c^2$ [3 sides]

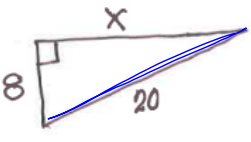↘ Soh Cah Toa

1.

m

8

6

$$8^2 + 6^2 = m^2$$

$$\sqrt{m^2} = \sqrt{8^2 + 6^2}$$

ignore

$$m = \sqrt{8^2 + 6^2}$$

$$m = 10$$

2.

x

8

20

$$x^2 + 8^2 = 20^2$$
$$ -8^2 -8^2$$

$$x^2 = 20^2 - 8^2$$

$$x^2 = 336$$

$$\sqrt{} \qquad \sqrt{}$$
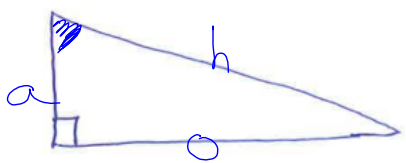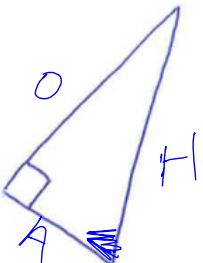
$$x = \sqrt{336} \quad \text{exact}$$

$$x \approx 18.33$$
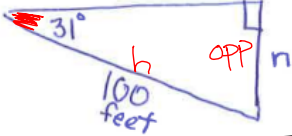
Sine
opposite — O
hypot. — h

Cosine
adjacent — a
hypotenuse

Tangent
opposite
adjacent

a   h

o

O   H

A

(3)
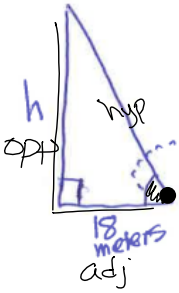
Soh Cah Toa

$\text{Sine}(31°) = \dfrac{n}{100}$

$100 \cdot \sin(31°) = n$

$n = 51.50$ feet

(4)

$\tan(78°) = \dfrac{h}{18}$

$h = 18 \cdot \tan(78°)$

$= 84.68$ meters

Toa

⑤

hyp W

50 adj

$$\cos(67°) = \frac{50}{W}$$

$$W = \frac{50}{\cos 67}$$

$$= 127.97 \text{ meters}$$

$C\underset{\uparrow\uparrow}{ah}$
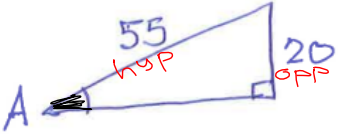
$\frac{2}{8} = \frac{1}{4}$ $\frac{4}{8} = \frac{1}{2}$

$\frac{4}{1} = \frac{8}{2}$

⑥ Find the missing angle: $\sin(A) = \frac{20}{55}$

55 hyp   20 OPP

A

Si

$$A = \sin^{-1}\left(\frac{20}{55}\right)$$

$$= 21.32°$$

x^2 r

B.B.

Pick Up
Classwork

h   **December 12, 2017**

classwork

Laura is standing on vertical cliff at point A looking at a ship at point B. The ship is 300m from the base of the cliff. The angle of elevation is 20°.

diagram not to scale
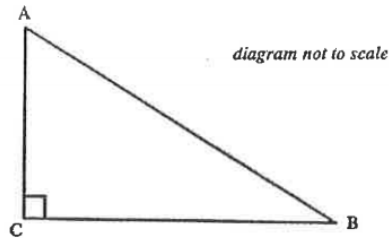
(a) Show on the diagram the values of

    (i) the distance from the boat to the base of the cliff.

    (ii) the angle of elevation from the boat to Laura.

b)   Another boat is 200m from the base of the cliff.

    Find the angle of depression from Laura to this boat.

WORKED ON
TRANSFER SKILLS

Equation
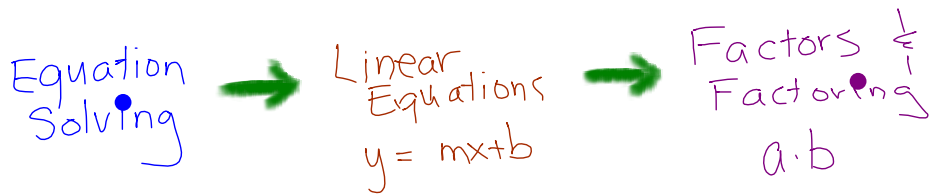Solving

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WORKED ON
TRANSFER SKILLS

Equation
Solving ➔ Linear
Equations
$y = mx+b$

WORKED ON
TRANSFER SKILLS

Equation
Solving   →   Linear
Equations   →   Factors &
Factoring
y = mx+b   a·b

WORKED ON
TRANSFER SKILLS

Equation
Solving   →   Linear
Equations   →   Factors &
Factoring
y = mx+b   a·b
                                            ↓
                              - FUNCTIONS
                              - Domain/Range
                              - Evaluation
                              - GDC

WORKED ON
TRANSFER SKILLS

Equation Solving → Linear Equations $y = mx+b$ → Factors & Factoring $a \cdot b$

↓

Review Assignment ← - FUNCTIONS
- Domain/Range
- Evaluation
- GDC
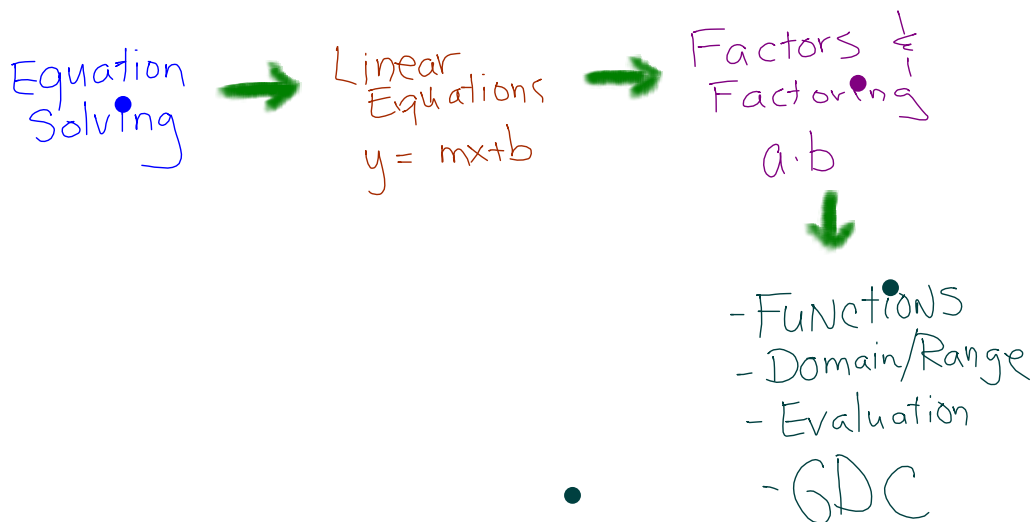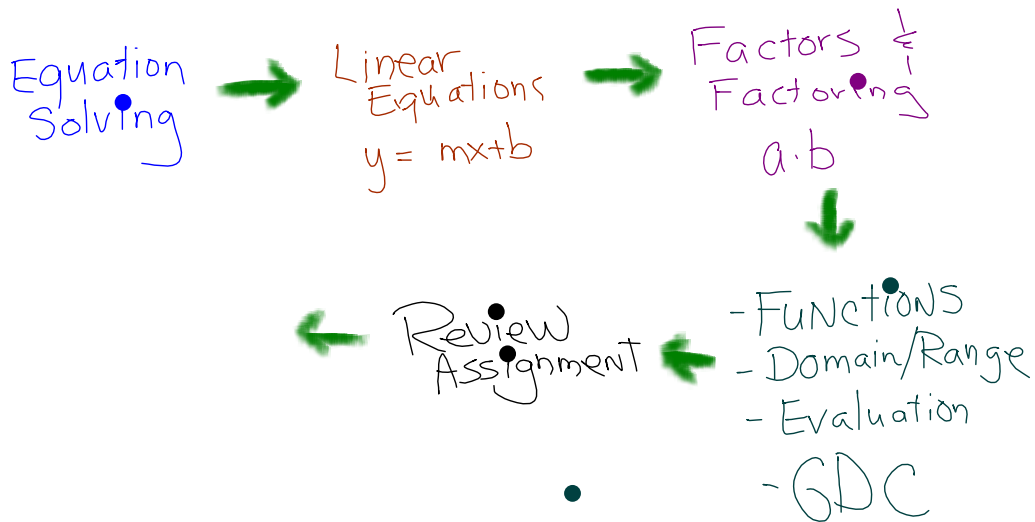
List of Test #1 Items for Algebra 2 Foundations

Solve equations, many varieties (be sure to review all warm ups and your notes)

Linear Functions (y=mx+b)
　　Write an equation of a line given two points (must show work)
　　Graph a line given its equation
　　Identify the slope and y-intercept given a line, you may have to convert to
　　y=mx+b format.

Factoring
　　By finding common factors
　　By using the difference of two squares shortcut
　　Factoring quadratic trinomials (the box/diamond is one method that works)

Evaluate functions (you can use a calculator)

Multiply two binomials (using FOIL, or happy face or the box.... Your choice)

Identify if a graph is a function

Identify the domain and range of a function

2-day Review Assignment

Do 1-37 odd
today/tonight

Remember It's not a race
to see how fast
you can finish.